VALIDATION OF AN INSTRUCTIONAL TECHNIQUE FOR TEACHING MANAGEMENT SKILLS

A thesis

presented to the Department of Psychology

University of Canterbury, New Zealand.

In partial fulfilment of the

requirements for the Degree of

Master of Arts

by

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1983

ACKNOWLEDGEMENTS

The author wishes to thank Mr. Bruce Jamieson and Professor Ken Strongman for their supervision of this thesis. Thanks are due also to Squadron Leader Keith McGregor, RNZAF whose suggestion initiated this thesis and whose enthusiastic assistance, both academically and socially, paved the way for a successful exercise.

Special thanks are due to the staff of the Command Training School, Base Wigram, especially Warrant Officer Ken Bradshaw and Flight Lieutenant Buck Buchanan. Special thanks are due also to trainees of the Flight Sergeant Qualifying courses, January, March, April and August 1982. Being involved with these dedicated men was a great priviledge and a pleasure.

Lastly, the author acknowledges himself. For the work done over many years for an adult education; the drudgery, the loneliness, the frustration and the maturity which develops from that and the application of all that learned within a worthwhile discipline.

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INTRODUCTION

Worker satisfaction and work production have been linked for some decades now in employee training and development literature. The notion that worker satisfaction can be improved by increasing upwards communication from them to supervisory level management has been popular since the early fifties. Claimed consequences of this type of intervention have included;

decreased worker turnover;

decreased absenteeism;

decreased product sabotage/scrap;

increased staff morale;

increased production etc, (Sorcher & Goldsten '72 p, 40; '74, p,21).

Attempts to achieve these goals have traditionally been met with theoretical explanations of interpersonal skills and exhortations from trainers to supervisors to "develop better communications", "increase job satisfaction", "identify with the company". The authors of the programme on which this thesis is based, Melvin Sorcher and Arnold Goldstein, maintain that observable behaviour is the only way of quantifying such goals of instruction and that the above phrases should be converted to specific instructions (Sorcher & Goldstein '72, p,35). A number of writers, both scholars and applied personnel, have adopted their approach to communications instruction which emphasises learning by modelling an acted ideal example. These writers have adopted this instruction format to teach a behavioural interview procedure which they have generated.

Interdependence of the two components of instructed contents and instructional technique has always been assumed in the few studies reported which have tested these programmes in industry. Regarding

technique, those studies relied heavily for the usefulness of modelling on Albert Bandura's work on social learning. The present research indirectly considers the appropriateness of modelling on some subjects as expressed by Bandura himself (Weiss '78; p.711). According to the researcher's literature review, analysis of modelling efficacy has predominantly considered manipulation of the modelling component. Fewer writers have considered the receptiveness to modelling by various subject groups. The limitation to Bandura's theory appears to reside on this point. Regarding contents, Byham and Robinson ('77) have produced a programme incorporating the instructional package of Goldstein & Sorcher ('74) which carries an intuitive appeal for the industrial-organisational psychologist because the module contents are based on democratic and humanitarian considerations rather than simply directives to resolve the problem (eg, the Training Within Industry programme, Department of Labour, New Zealand). This programme needs analysis; and it is the aim of this thesis to consider the contribution of the instructional technique of modelling to the programme and the value of the programme's contents in promoting greater worker satisfaction than traditional instruction.

Consideration of the humanitarian and democratic aspect of the programme is particularly relevant in the present research as the analysis is applied within the military, where the relevance of humanitarian consideration is often thought to be secondary to organisational goals, certainly, consideration of democratic management skills may be alien in an otherwise authoritarian organisation. Hence, this aspect of the programme may produce more accentuated results in this research than if the programme was applied in civilian settings.

As far as can be ascertained, this is the first time that a module of the Sorcher and Goldstein ('74) programme has been applied in the military setting in any country.

The present study was designed by the researcher to meet thesis requirements, and to evaluate an elaboration of present Royal New Zealand Air Force education in the field of interpersonal skill for supervisors. It was developed so that, if appropriate, it could be incorporated into the RNZAF training programme.

Chapter one of the text considers the research literature relevant to modelling and also considers the suitability of the Sorcher & Goldstein ('74) programme to the military. Hypotheses are stated and the Rationale which follows elaborates on this introduction. Chapter two describes the RNZAF setting, the needs analysis carried out and describes the method of experimentation used. Chapter three details the results of this experiment and Chapter four discusses those results. Chapter five, the conclusion considers the utility of the programme analysed and suggests changes that could be applied both to it and to any future experimental designs on training analysis. Bibliography and appendices conclude the thesis.

LITERATURE REVIEW

The literature review comprises two sections. The first discusses modelling in social skills training and concentrates on narrowing this very broad field down to the elements which are relevant to the present study. It rejects paediatric and clinical findings as appropriate to the training of adults, considers modelling as an additive component in training programmes then considers findings on verbal instruction versus modelling. Psychological differences between different instructional components are considered and research into their application in industry is discussed. Emphasis is placed by the researcher into considering personality characteristics of trainees as being independent variables in instructional component evaluation.

The second section briefly considers the argument for and against the introduction of the democratic management style into the military.

Modelling in Social Skills Training

Modelling is one of the most widely used treatment components in social skills training. Over 70% of studies that one writer reviewed made use of a role model who performed a behaviour which was imitated (Twentyman & Zimering '79 p.328). While model presentation varied widely, most experimenters employed models whose characteristics closely related to the specific target behaviour and subject populations. This may be expected as modelling is best received when similarity between the model and observer is high (Bandura, Ross and Ross '63, p.529).

Reviews of modelling effectiveness have each covered unique aspects. For example, Bandura and Walters ('63) and Mowrer ('60) presented theoretical reviews of their own and others' viewpoints; Flanders ('68) covered dyadic modelling literature and Akamatsu and Thelen ('74) concerned themselves with observer characteristics affecting their reception of modelling. Twentyman & Zimering ('79) concerned themselves with the evaluation of social skills training in general.

Many studies using modelling components have been done in the clinical and paediatric fields (Kazdin '79, Jaffe and Carlson '76, McFall and Twentyman '73; Friedrich and Stein '75; Masters et al '76, Halpin '79). The researcher contends that it is erroneous to consider findings from experiments in these fields as the subject populations are too different from those of the present study. An explanation for this contention in regard to children as subjects is offered by the researcher.

"The age of the observer is likely to be a moderating variable. It seems likely that the very young children have not yet become attentive to agents who serve as models because they have not yet acquired the capacity to respond empathetically to the displayed emotions of others." (Masters et al '76, p.429).

Even with the exclusion of the two field of paediatrics and clinical psychology, the status of modelling effectiveness in the social skills literature is controversial. Modelling in combination with other behavioural techniques, such as rehearsal, coaching and feedback constitutes an effective treatment combination (Winship and Kelley '76, Zieger '73), but the effectiveness of modelling per se is less clear. (Stone & Vance ('76) in training college students to become more assertive, used seven different treatment groups in attempts to separate individual component effectiveness. They found that modelling was as effective as a combination of coaching, modelling and rehearsal for the specific skill of increasing communication during interviews. Other authors found scant differences when modelling was employed as an additive treatment package or a separate treatment (McFall & Twentyman '73, McFall & Galbraith '78).

Consistent positive findings were made with "covert" modelling (Nietzel et al '77). However, in this case, covert modelling employed a rehearsal component. This component appears identical to the role play component of Goldstein & Sorcher's package.

Voss et al ('78) supported his hypothesis that modelling becomes an effective component when complex assertive situations are trained. However, complexity here obviously is defined by the subject group's characteristics.

In contrast to McFall and Twentyman ('73), and McFall & Galbraith ('78), Twentyman & Zimering ('79) concluded their overview with the finding that modelling is most effective when included in a programme

consisting of other treatment components.

The treatment component, besides modelling, employed in the present study is instruction, and the discussion hereafter considers findings on these two treatments together.

Stone & Vance ('76) examined these two components in conjunction and singly in an attempt to systematically dismantle and test a training programme based on Carkhuff's model of training (Carkhuff '69). Stone & Vance's analysis of all groups (undergraduate students) was by self report measure and interview. He found that instructions facilitated written response and modelling facilitated role play responses. He suggested that the response demands of the written and interview talks may not be comparable (p.278). Again, overall, the multi-component designs were more potent than single component designs.

This could be due to a variety of causes he suggests:

1. The potency of each individual component may be limited to immediate recall only;
2. the combined conditions may have offered more information and vicarious stimulation;
3. more components meant more time involved.

He suggests that until time is controlled in such experiments, it will always be a contaminating factor.

Another experiment which was also confounded by time and which used similar subjects was that of Uhleman, Lea and Stone ('76). Their instructional component was slightly different from that of Stone & Vance in that subjects were told to perform according to a set of criteria. They found that instruction that provides an explicit elaboration of performance rules and that direct the participant to engage in those specified behaviours, facilitates performance. However,

they question whether adequate modelling exposure time had elapsed for vicarious learning to occur (p.510). Further, they conclude that trainees low in interpersonal communication skills need a more structured and intensive learning experience than the one provided in the present study before established response patterns can be changed. These two experiments raise the question therefore of whether time or instructional technique is more effective for learning.

Bailey, Deardorff & Nay ('77) tested modelling against video feedback and role play for the simulated training of clinical counsellors. Critical behaviours were empathising, eye contact, nonverbal behaviour. genuineness etc. Their finding that modelling was the most efficacious component is not surprising as, lacking specific verbal instruction on what constituted "correct" eye contact etc, modelling was the only education provided. Again, they found the effects of combined components greater than for any single component. They suggest the success of such omnibus programmes is not a function of the sum total of effects for it appears different components contribute in an assymetrical fashion (p.265).

Olsen ('72) has a different interpretation of the argument of additivity of components. His study into the learning by children from modelling, instruction or reinforcement concludes:

"Instructional forms with widely different typographies not only may lead to the same terminal performance but to some extent convey the same information..... The information from these sources differs widely however in the ambiguity of the information and the assumption each of them makes about the learner. I have attempted to show that the instructional forms considered here on the whole increase in the amount of information conveyed (information density) from reinforcement to modelling to language. The demands placed on

the listener both in terms of literacy and complexity of the mental processes involved appear to be perfectly correlated with information density. Thus the highly informative instructions tend to place the highest demands on the listeners. Good instruction is a matter of optimally arranging these two functions." (p.22).

The research discussed thus far results from experiments conducted on student subjects, trainee counsellors etc. Also it is concerned with the manipulation of modelling treatment. Few experiments have been carried out on the efficacy of modelling versus instruction on mature, assertive, high self-esteem subjects, such as lower level management in industry. Journals reporting applications of various training techniques are oriented more to commercial appeal than scientific validity.

The value of modelling versus instruction has had little if any analysis in the industrial setting. Such analysis is necessary the researcher suggests, because:

1. Video modelling, while initially costly may be cheap in terms of time expended to convey an instruction;

2. Organisations have an "image" -- an approach that the organisational heirarchy takes pains to ensure its staff replicates. An instructional format which models this image leaves less ambiguity in the trainee's mind of what is acceptable replication of the instructed skills.

McGhee & Tullar ('78) searched the training literature from 1967 to 1976 for reports on scientific evaluations of behaviour modelling in industrial training. Only four reports were found. All were quasi-experimental designs and all found significant effects for modelling components.

Burnaska ('76) found that behaviour modelling was a positive component in teaching interview skills to 62 middle level managers from six separate companies. He reported effects lasting up to four months after training -- as reported by subordinates of trainees. Moses & Ritchie ('76) evaluated modelling on 90 supervisors of American Telephone & Telegraph and tested usage of a behaviour assessment centre for evaluating results. Byham, Adams & Kiggins ('76) investigated the extent of transfer of modelled training to the work-place by eight line supervisors and Smith ('76) used as training effectiveness criteria, customer satisfaction and sales performance. An addition to the list is a true experimental design reported by Latham & Saari ('79). They found no deterioration in modelled treatment effect at eight months after training.

All the above used the four instructional components of Goldstein & Sorcher's ('74) package, similar to that used in the present experiment.

However, McGhee & Tullar question the internal validity of the first four because of quasi-experimental design faults not being accounted for. While their criticisms have been supported, (Decker '79), the value of the four is still high. McGhee & Tullar ('78) conclude:

"Available published scientific evaluations of behaviour modelling training in industry contain no clearcut evidence for its effectiveness as an industrial training technique ..... Thus a question still remains as to the relative contribution to variance explanation of modelling training vis-a-vis selection, subject mortality, instrument decay etc." (p.483). The true experimental design of Latham & Saari ('79) eclipses the validity of the above four.

One theorist (Weiss '78) has conducted research into characteristics of modelling in industry. His work suggests a change in emphasis from manipulating the order of treatment components (Bailey et al '77) to considering trainee characteristics.

Weiss ('78) researched the social learning of work values within organisations, particularly supervisory styles among managers, to find relations between three characteristics said to provide information about the appropriateness of imitation. Bandura ('71 and '77) has argued that model characteristics such as success, competence and nurturance provide information about the appropriateness of imitation and the likelihood of the observer receiving valued outcomes for behaving similarly or expressing similar values, (Weiss '78 p.711). In Weiss' study, pairs of supervisors and subordinates were evaluated for imitation behaviour. Weiss ('78) found imitations of supervisor's work values were significantly related to each supervisor's generally perceived success and competence within the organisation. Nurturance ("non contingent affection and warmth toward another individual," Weiss '78, p.712) was only correlated to similarity of work value for those low in self-esteem. Support for this finding by Weiss has been found for military personnel by Bleda ('68).

This supports the view that modelled behaviours are more likely to be duplicated by those who are immature, or, in the case of Weiss' ('68) subjects, low in self esteem. The findings by Weiss ('78) and Bleda ('68) also suggest that nurturance will only be appreciated by subordinates who are low in self-esteem.

Trainee or observer characteristics in modelling were reviewed by Akamatsu and Thelen ('74) who addressed the within subject variability in published results. The characteristics they looked at were; competence, arousal, need for social approval, dependency, self-esteem, anxiety, authoritarianism and aggressiveness. Competence, while

favouring imitation when modelled, inhibited imitation if the observer had previously experienced competence in that skill (eg, assertive behaviours, counselling).

Mausner and Block ('57), using undergraduates, investigated the combined effects of a component model, incompetent subordinate and a previous co-operative experience between the two and concluded that foremen who have closer contact with their subordinates than other foremen are less likely to imitate a classroom instructional model unless their prior experiences had been negative.

Summarising the findings on the relationships between the above personality characteristics, Akamatsu and Thelen suggest greater imitation is shown by subjects who are aroused, low in self confidence, high in anxiety, highly dependent and high in need of social approval (p.45).

This list of traits is not a picture of the typical military senior NCO. However, the researcher's needs analysis (Appendix 1) indicates that these factors may well be present in a specific feature of their work -- oral communication -- in particular, with problem subordinates.

Summary This overview of the literature takes into account the early experiments on modelling which sought a correct treatment formulation. A consideration of instruction versus modelling as treatment gives way to the approach of Akamatsu and Thelen ('74) that the characteristics of subjects has been overlooked. The literature appears to offer little support for the contention of Goldstein and Sorcher ('74) that the modelling component of their programme is necessary when teaching interpersonal skills to experienced supervisors.

Democratic Management and the Military

The changing character of the modern workforce has been often documented. Goldstein and Sorcher ('74) point out that an employee's

job performance is determined by a number of influences and one of the most influential and accessible to manipulation is the employee's supervisor. Goldstein and Sorcher ('74) maintain that because people are better educated today than a generation ago, have travelled more and have greater expectations in a society which offers diverse opportunities, they have less tolerance for authoritorianism and organisational restraints. They maintain that the consequence is that in many cases supervisors are carrying out a 1908 role in a 1980's job (p.8).

Interviews with small groups of factory workers (Sorcher '71) revealed that employees consistently identified several specific behaviours that distinguish a good foreman from a poor one. A good foreman they felt, treats people as individuals, trusts them, shows interest in their welfare, recognises good work, listens well, asks employees to express their opinions and puts subordinates at ease while talking with them. In summary, a good supervisor enhances the self esteem of his subordinates.

Two points emerge from the above that are worth noting. Firstly, "self-esteem" while presumably universally sought by individuals, may be sought more by unit success (eg, regimental glory) by forces personnel than through individual enterprise. After all, an important reason men join armed forces is to belong to an organisation (Maslow,A.H. '43). Secondly, while workers may list their requirements for an effective supervisor, supervisors may have a completely different set for their peers, and for their superiors a different set yet again. (Personal communication, Wigram personnel). Such a situation would engender preconditions for conflict of purpose of the unit (Dixon '82).

To what extent these two points are instrumental factors in personnel turnover within the military service, is unknown. They are, the researcher suggests, potent precursors to the success of any manipulation of military authority style. The interaction modelling

intervention of Goldstein and Sorcher as used in this exercise, while it may be well developed for civilian personnel, has no known validation for the military. The matter of NCO and officer competence arises.

Rich ('78) points out that a quality of life survey administered in 1975 to USAF personnel indicated 72% of the 58,000 subjects surveyed thought air force leadership was average to poor. He recommends Interaction Modelling as a solution. But the data for the survey are not published. It is not known therefore if the suggested solution is appropriate to the need.

Addressing this argument, Goldstein & Sorcher ('74) speak of maintaining a subordinate's self-esteem. This is to be done by empathising with his explanations and eliciting his suggestions for solutions to a problem. But both of these behaviours may be antagonistic to military mores.

Considering individuality within the military Jacobowitz ('80), in a forces journal, explains that an army's combat effectiveness rests on the degree to which unit members are socialised to unit norms and values. With the emphasis in (American) society towards individual development, alienation by the individual to the unit (company, regiment etc) is a consequence, he says. Because of the nature of its role in society and the necessity for it to maintain unit cohesion, the military is likely to be the last sector of society to yield to individuality emphasis;

"..... the military man emphasises the importance of the group as against the individual. Success in any activity requires the subordination of the will of the individual to the will of the group. Tradition, esprit, unity, community -- these rate high in the military value system." (p.25).

The consequences of change from these values can be disastrous. Civilian industry measures its worker discontent by indices of absenteeism, turnover, product sabotage etc. An inefficient military unit

under combat conditions has more dramatic indices, such as mutiny and murder. Gabriel ('81) points out that in the Vietnam conflict the U.S. Marine Corps incurred fewer incidences of officer assassination and mutiny than the regular army. Between 1964-72, 121 marines were charged with murder of superiors compared to 1016 admitted killings in the army; 26 cases of mutiny were reported in the Marines for that period, compared to 245 in the army for one year for a single division only. Gabriel attributes this to the traditional practice of military order and discipline that the Marine Corp refused to abandon despite some pressures to move to more managerial and modern ways of handling troops (p.84). Even critics of Gabriel support this contention. There is some evidence however that improvement of military life should be achieved by consideration of personnel rather than material needs. Bleda ('77) assessed the degree of association between newly enlisted mens' perceptions of army life and their perceptions of different types and ranks of leader. (Factor analysed aspects contributing to army life or "organisational climate" included: being treated as an individual, getting things done, leadership, rules and regulations and opportunity to get ahead). Bleda concluded:

"At least for the present sample, quality of army life is most closely identified with the organisational climate on post. Therefore efforts to heighten morale and motivation would be directed more fruitfully toward modifying the organisational facet of day to day existence rather than either, in improving the basics (eg, pay) or providing more fringe benefits (for example, post facilities)." (p.48).

Bleda was also able to conclude in which direction such efforts should be applied:

"Also, while the behaviour of originators of orders was viewed less favourably than that of givers it is the formers' attributes that are more closely tied to subordinates' satisfaction. In other words,

it is the management and not the foremen who play the critical role in determining the nature of the rank and files' military experience." (p.48).

While the above argument centres on the army, the relevance to an air force is likely to be very pertinent. The researcher cannot establish such relevance with certainty, but RNZAF administrators are divided on the issue of whether air force trades personnel should be more attentive to military organisational values such as discipline, or to civilian values, such as work excellence (Personal communication, Wigram CTS, '82). The researcher suggests that it is on such arguments that the validity of the application of interaction modelling with its attendant democratic principle, succeeds or fails.

In conclusion, to introduce Goldstein and Sorcher's('74) principles may favour one camp and alienate the other. Their principles may well favour the relationship between working personnel but disfavour the organisational needs of primacy of the unit over the individual.

RATIONALE

This study is essentially an analysis of the role which modelling plays in the instructional package of Goldstein and Sorcher ('74). The body of research done on programmes which utilise their package has served only to prove that the programme has beneficial effects for teaching supervisors effective interview techniques.

The instructional package has four elements to it. They include:

<u>modelling</u> an ideal example;

<u>role play practice</u> of similar scenarios;

<u>social reinforcement</u> from peers and instructors; and the

<u>transfer of learning</u> to the back home situation.

Sorcher and Goldstein ('74) maintain that each of these elements has unique and additive value to the learning of the module contents. The experiment by Latham and Saari ('79) considers the contribution of modelling alone to the package by comparing it against instruction only. However, their treatment did not fully utilize the medium of instruction. This researcher approached development of his treatment by including in the instruction all that was considered contributory to the effective learning and understanding of the programme contents. This research is therefore a truer test of the educational advantage of modelling over instruction in the programme -- a valid consideration in light of the cost of audio visual equipment which the package might otherwise entail.

The other component in the programme is the module contents or interview guideline steps. The contents is regarded by the researcher as being independent from the instructional process in that it is possible to teach it by traditional methods; but more particularly it has a unique philosophy which should be analysed separately. The contents essentially addresses the notion of a democratic -- autocratic continuum discussed extensively in the industrial/organisational and management literature of the 1960's as Theory Y-Theory X type management (McGregor '60). This philosophical character is quite separate from any consideration of the instructional technique. In the present study this content is tested by comparing it with the presently used instruction on interviewing troublesome subordinates. Criteria of its worth are indications of improved interviewer capability to resolve interpersonal problems by interviewing in such a manner that either practical or psychological benefits accrue for either the interviewee, the interviewer or the organisation.

Subjects used for this research were personnel of the Royal New Zealand Air Force. They were offered to the researcher by the

Wigram base psychologist who suggested testing the Sorcher and Goldstein based programme in the military situation to improve instruction in the area of communication skills. The major advantage in using such personnel is that they are relatively homogenous in training and experience compared with supervisory personnel in most civilian organisations. They are also an interesting group on which to test the programme. As discussed in the literature review, they would appear at first sight to be unsuitable as subjects for modelling instruction. But the researcher suspects that modelling has a particular usefulness for the RNZAF in conveying accurately the organisational "image". This facet of modelling has not been considered in any research literature.

It is the personal opinion of the researcher that every organisation possesses a "face" which is shown through the behaviour of its members and which it takes great pains to inculcate in them. The usual method for doing so is the admonition to "identify with the company". The researcher suggests the package conveys this inculcation in maximising transfer of learning to the home environment. Goldstein and Sorcher ('72) recommend that an authority within the trainees' organisation introduces the modelling component and recommend its usage. With this approval, the modelling component carries with it an implicit instruction on what constitutes a legitimate use of the interview steps. Considering that the programme is an application of democratic management skills and considering that the military is an authoritarian organisation, this endorsement by an authority and appropriate interpretation of the skills would be most important for effective learning to occur and to be correctly applied. Consequences of this in the present research should be higher rating on dependent variables, particularly those concerned with interviewer competence.

Does the RNZAF need such an intervention? The following is a description of the means available for dealing with subordinate's work-related personnel problems. It was felt that improvements could be made in the extent to which senior NCO's could handle this type of problem - solving. A large proportion of RNZAF personnel are tradesmen. Administration, electronics, airframe and clerical departments are the four major trade categories. The trainees used as subjects were sergeants in training to become Flight Sergeants. This would be equivalent in civilian terms to foreman and superintendant respectively. Their work duties are those of tradesmen, not combatants. However, their primary means of direction of subordinates is by reliance on the authority of their rank as sergeants, with the organisation as a whole enforcing compliance with such authority. Formal channels exist for subordinates' grievances, but otherwise there is little allowance within the structure for upward communication from subordinate to sergeant. This manifests as a major difficulty when attempting to resolve some leadership problems such as difficulties of a troublesome subordinate, where the interviewer may be habit-bound to be authoritarian. A characteristic philosophy of many is that such subordinates should "pull their socks up". The characteristic means of finding solutions is for the sergeant to note the subordinate's presenting signs of discontent or poor performance, discuss these with the subordinate, and then with relevant others in order to find a precedent to follow in resolving the difficulty or to suggest a sequence of solutions to the subordinate to seek a "best fit". These solutions usually include promotion, leave, transfer of work site or base, counselling from a service authority or from the service padre. Apart from these counselling avenues, there is little allowance for the subordinate to contribute any solutions to the problem. At best, this method of

problem solving involves considerable time in searching for a solution which provides little scope for individuality. However, at worst the technique obliges a serviceman to suffer the possible ignominy of having his problems becoming the knowledge and concern of a number of people, and having to endure interviews with authorities who may be ill-equipped to assist.

The principle of democratic style decision making is endorsed by the Command Training School (CTS Notes on Functional leadership). However, the occasions for application of such leadership are not spelled out. Assisting a man to resolve work-related difficulties is one occasion, the researcher suggests. Corroboration for this comes from the researcher's need analysis. (Appendix 1, Item 4, Item 5, Item 6. The RNZAF is aware that its personnel management is in need of examination. Loss of trained personnel from the force over the years is of high concern to authorities (Personal Communication, January, '82 CTS). It is the consequence of a number of factors but personnel management rates a high priority among them (Personal Communication, Wigram base psychologist, February '82, CTS trainees, January '82). Revision of the CTS syllabus to improve trainees' man-management capabilities is desired by CTS instructors (Personal Communication, November '81 and January '82), and the CTS is looked on by trainees as being the logical source for such improvement. It was intended by both the RNZAF authorities and the researcher that this research would by of some benefit to the school.

HYPOTHESES

1. That the Six Steps contained in the programme provides a superior interview technique to the traditional RNZAF instruction.

2. That the use of modelling is a superior instructional technique to verbal instruction only.

METHOD

THE RESEARCH SETTING AND SUBJECTS

The Command Training School (CTS) at RNZAF Base Wigram is involved in the training of NCO's (non-commissioned officers) and officers in skills, responsibilities, rights and procedures pertaining to a rank. These include such as dinner table etiquette, military law and base defence measures. General service knowledge instructors (GSK's) share the workload of instruction with officers. The sergeant to Flight Sergeant course concerned is three weeks long. This course was chosen for the following reasons:

1) There are five courses a year with 20-22 trainees a course;
2) Trainees return to their prior work setting, usually at the former sergeant rank, with identical duties;
3) Sergeants are a more homogeneous group than lower ranks, with a forces tenure of eight to seventeen years plus.

Trainees qualify to attend the course by a complex arrangement of such factors as preparedness to relocate, length of service, technical competence, social popularity, base vacancy for that rank and superior's approval. The rank and work of a sergeant is equivalent to that of a civilian foreman; a flight sergeant to that of a superintendent.

Courses concerned were held in January, March, April and August of 1982.

Trainees were largely tradesmen in any one of the five major air force branches: Avionics, airframe, clerical, administrative and aircrew. (Such aircrew are tradesmen who have carried their trade to a flight environment on aircraft. The pilot is the nominal commander).

TRAINING NEEDS ANALYSIS

The researcher attended the January course for the purpose of learning procedures, terminology, mores etc of the RNZAF. Attendance in the classroom was arbitrary, being determined by the relevance of the topic to the researcher's interest. Discussions with GSK's were possible and frequent. Some evening time spent in the sergeants' mess with trainees helped develop a warm relationship to many of them. In retrospect, and in light of the reactions by August trainees (see Reaction) to a stranger, the researcher suggests the familiarisation derived from informal occasions is a potent variable facilitating treatment acceptance.

A questionnaire was distributed to evaluate the course and material then being taught. Results are contained in Appendix 1.

Verbal, written and observational data were therefore obtained for the analysis. At this stage, two modules on interpersonal skills were planned. However, recognition by the researcher of the work-load involved in the thesis if undertaking more than one module, reduced the utility of the needs analysis. The basis for a treatment involving interviewing problem subordinates is substantiated by the needs analysis, the researcher claims.

Procedure

The researcher and base psychologist were introduced for the other three courses in the second week to conduct pre-measures. The psychologist who had a rank of officer, explained the reasons for a revision of instruction to trainees on how to interview troublesome subordinates. For all intakes he explained the necessity of pre and post measures. Trainees were then given two role-play scenarios -- one role as interviewer and another as interviewee. The two roles were never of complementary scenarios. Trainees were assigned to role play in

front of either the base psychologist or the researcher by merely dividing the roll of names in two. All trainees were completely unknown to both base psychologist and the researcher at this stage.

During the interviews, no comment or assistance was given at any stage and the only conversation was a brief chat as an introducer or as a tension releaser at the end of each role-play. Few trainees had role-played before. Role-plays lasted from three minutes to fifteen minutes, averaging eight minutes. Questionnaires were distributed prior to the role-play commencement and trainees filled these out while waiting their turn to role-play. (Latham & Sarri '79). Trainees role-played interviewer first then interviewee.

Later in the week a GSK instructor applied the 'traditional' treatment. This consisted of a study of the theory of functional leadership. Instruction was then given on handling troublesome subordinates. This consisted of:

a) Defining a problem as to whether it is within the scope of the SNCO to handle;

b) recognising easily solved problems (eg, personality clashes with workmates) or difficult ones (eg, marital);

c) recognising a set of "do's" and "don'ts" on how to speak to a subordinate and how to handle specific problems.

It was considered by all concerned that this material was entirely compatible with the treatment.

For the March intake (Control), post evaluations were then made using the questionnaire and role-plays. Care was taken to ensure trainees did not receive role-play scenarios used in pre role-play evaluations.

For April and August intakes (Experimental groups 1 and 2 respectively), the researcher team-taught the treatment with the GSK

TABLE 1

Summary Table of Evaluations and Treatments for Subject Groups

March	Pre PPQ Pre R/Pl	Traditional Instruction →			Practice R/Pl	Post PPQ/ Post R/Pl	Long Term Questionnaire
April	Pre PPQ Pre R/Pl	Traditional Instruction	Team Teaching of Six Steps (Treatment One) →		Practice R/Pl	Post PPQ/ Post R/Pl	Long Term Questionnaire
August	Pre PPQ Pre R/Pl	Traditional Instruction	Team Teaching of Six Steps (Treatment One)	Video model of interview incorporating six steps (Treatment Two)	Practice R/Pl	Post PPQ/ Post R/Pl	Long Term Questionnaire

Two months elapse

instructor (Appendix 2). A small card was issued to each trainee on which was typed the six steps. They were told to pocket this and use it in back-home interviews as prompts. The teaching sessions in both courses lasted well over two hours. Throughout, questions, interjections and discussions were allowed. Use was made by both teachers of the blackboard and overhead display unit.

For the August intake (Experimental 2), instruction was followed by a video film of a model interview being carried out by a flight sergeant and sergeant. (These were actual air force personnel and the film was made for the treatment, based on the model in Rich '78 (Appendix 6). Trainees were told this was an ideal example to emulate. Unfortunately, control of the treatment was lost by the researcher at this point. Instructions should have been given to note the sentences used by the interviewer to usher in each step (Byham, Adams and Kiggins '76, p.193). The tape should have been shown again for this purpose. Instead it was shown only once with no instructions given except an invitation to make what they liked of the modelled display, (see Reactions).

For both experimental groups following treatment, a practice session of one hour was held where trainees role-played use of the six steps. Other scenarios were used than those for evaluational purposes (see Summary Table 1).

The scenarios were written by the base psychologist and checked for face validity by SNCO's. (Appendix 3). Five role-plays depicted general problems, in settings appropriate to each of the five trade sections of the force. This ensured a fairly even identification by trainees with the settings. The scenarios were randomly assigned -- an interviewer and interviewee script to each trainee. Peer trainees were used as interviewees (Latham & Sarri '79) because:

1) Two trained interviewees would tire dramatically after ten interviews (approximately 90 minutes in total);

2) the literature is equivocal over the value of standardising interviewee roles (Akamatsu and Thelen '74, p.44);

3) lower ranks could be ill-spared from regular duties.

Time available to read the scenario varied from less than five minutes for the first pair to one hour for the last pair. In the two experimental groups, trainees were not instructed to follow any particular format. Rather, it was left to each trainee to apply what he had learned from instruction in the most effective manner. Interviewers in one role-play session became interviewees in the next. The interviews were audio recorded. Role-play scenarios were rotated for the post instructional role-play session, thus eliminating learning of script as a confounding variable. Post role-play sessions followed within ten days of the pre sessions.

EVALUATIONAL INSTRUMENTS

The Role-Play

This was the major evaluational tool (after Latham & Sarri '79). To offset contamination of role-play measures by demand characteristics (Twentyman & Zimering '79), self report questionnaires were used as supportive instruments.

Questionnaires -- Rationale

Three questionnaires of identical contents but administered to three different populations, were intended. A self-report questionnaire, subordinates' and superiors' questionnaires were developed with the intention of correlating them with role-played behaviour. An hypothesis that role-played behaviour was indicative of attitude and behaviour change was subsequently abandoned, thus negating some of these questionnaires' value. The pre-post questionnaire (PPQ)

B Section was compiled as a behaviour observation scale (BOS) (Latham & Mexley '77, Latham, Fay & Saari '79). Items were compiled be eliciting 10 effective and 10 ineffective behaviours from base personnel. To obtain a range of perspectives on critical behaviours, and because superiors were still to be surveyed, listings of such behaviours were obtained from four Wigram warrant officers (very senior NCO's), four flight sergeants and two corporals. (Latham, Fay & Saari '79). In addition, items from 20 Woodbourne base personnel were obtained by telephone.

Selection and checking from this pool were done by the base psychologist and the researcher. (Latham, Fay & Saari '79). Selection choice was made on the basis of how much the behaviour in question was considered to relate to any of the six steps.

-- Subordinates' Questionnaire

This questionnaire was intended to obtain ratings from those to whom any change in interview skill would be applied (Cascio '74, Byham, Adams and Kiggins '76, Burnaska '76). Such an instrument has superior validity to role-play assessment or self report questionnaire. (Twentyman & Zimering '79 p.354).

Items for the questionnaire duplicated the April and August trainees' format, BOS scales only.

Permission to survey subordinates of trainees was sought by the base psychologist and the researcher from March trainees during their course. While some agreed with the view that objective evaluations of their behaviour was necessary, the majority were concerned that their subordinates were going to be invited to query the behaviour of their superiors. This concern did not abate in the days ahead but instead became a concern of school instructors also. The questionnaire was abandoned.

-- Superiors' Questionnaire

Items for the questionnaire also duplicated the April trainees' format, BOS scales only. This questionnaire was posted out and completed by a number of officers. However, official reaction occurred because the endeavour of the questionnaire exceeded what was regarded as fair assessment of a man. Fair assessment for performance appraisal in the RNZAF involves assessing a man or a woman's work. Assessment of his or her interaction skills necessarily involves assessment of the personality. This was objected to by the air-force authorities. The questionnaire was withdrawn.

Further attempts to attain a superiors' questionnaire were abandoned because:

1) Official approval was time consuming to obtain for the first questionnaire. Greater difficulty was anticipated for the second after the failure of the first;

2) the time lag from the cessation of the March course was becoming longer than two months.

In abandoning this questionnaire, hopes of attaining back-home objective behavioural assessment ended.

-- Long-Term Questionnaire (LTQ)

With the failure of the superiors' and subordinates' questionnaire, this instrument was developed to try yet again to quantify any behaviour change (Appendix 5). Had the above two designs succeeded, the PPQ would have been issued as a long term evaluation instrument.

The LTQ also contains two sections -- the first (items 1-14) to determine whether the trainee has actually used any of his new knowledge and his opinion and suggestions for the course; (This section was generated partially for the benefit of the RNZAF); the second to determine what direct benefits may have been derived by him learning the six steps. (Item 15)

It was considered by the base psychologist and researcher that BOS scales are adequate when applied to gross supervisor behaviours but more subtle behaviours such as interview skills are registered by only a small subsection of these scales. A set of items was therefore developed which would be expected to indicate direct behaviour response on the six steps, ie., would have high content validity. This was done by listing objectives of the training that would be discernable to at least the trainee if any of the six steps were applied in the back-home situation. (Tuckman '78).

RESULTS

OVERVIEW

To analyse the results, four statistical programmes were used (Nie et al, '75). They were as follows:

Students t-test was used to test for differences in means between pre and post measures for each group for both the pre-post questionnaire (PPQ) and the role-play behaviour (or observed behaviour). The results of the t-tests are reported but discussed only in relation to the analysis of variance data. The t-test was also used within the contrast function (Nie et al '75) to test for differences between pre and post measures across groups.

The analysis of variance programme was used to test for homogeneity across pre measures on both role-play behaviour and PPQ item ratings. Homogeneity of post measures was similarly tested. This programme was also used to test for differences between pre and post measures across groups. It was also applied to compare long term questionnaire responses across groups. This programme was therefore used to analyse the A and B sections of the trainees' questionnaire and the A and B sections of the long term questionnaire (Tuckman '78).

Pearson's R was used in developing a correlation matrix of the ten role play assessment variables. It was also used in assessing rater reliability of recorded role plays.

A principal components analysis was done on the Pre-post questionnaire. This is reported and discussed in Discussion of Results. The results are not included in the Results chapter as the analysis does not relate to either hypothesis.

OBSERVED BEHAVIOUR

Across group analysis of variance comparison of pre measures

showed significant differences (Table 2), indicating that the three groups possess different characteristics at the outset of the course. Analysis of variance of post measures indicates a similar variation (Table 2a). The consequences of this will be discussed under Discussion of Results.

Comparisons of differences between pre and post measurements across groups (Table 3) showed significant differences between the control group and first experimental group on nine out of ten measures. The null hypothesis is therefore rejected for the first hypothesis. The treatment programme is superior as an interview instruction to the traditional instruction on these dependent variables. Table 3 also shows that significant differences appear between the first experimental group and the second experimental group but in reverse order to what was anticipated. What was thought to be the most effective treatment shows lesser means than the other treatment on five out of ten measures with a trend on a sixth. The null hypothesis is therefore retained for the second hypothesis. Modelling is not shown to be a superior instructional component.

PRE-POST QUESTIONNAIRE (PPQ) -- ATTITUDE AND BOS SCALES

Data in Table 4 are the means and standard deviations of pre measures across groups for items of the attitude scale and the Behaviour Observation Scale score. There were significant differences on Items 1, 3, 4, 9, 10 and 20 of the attitude scale items. Table 4a are the data from the analysis of post measures on this scale. Differences appear on items 1, 4 and 9. The cause and consequences of these results will be discussed under Discussion of Results.

An analysis of variance of differences in pre and post measures showed neither the attitude scale nor the BOS scale total scores to indicate any effect. To obtain some meaning from the attitude scale,

individual items were therefore analysed. Table 5 summarises the analysis of variance across all groups for items of the attitude scale and the BOS scale score. A significant difference is reported between the Control and the First experimental groups on only the first item. Two others approach significance. The null hypothesis is retained for both hypotheses by this instrument.

LONG TERM QUESTIONNAIRE

Table 6 summarises the analysis of variance across groups of data recorded from the long term questionnaire. Only the difference between the means of the first experimental group and the second experimental group on item 5 reach significance. Item four was not analysed by Anova but by a response frequency count (Table 7). Because N levels are low, tends are discussed.

The null hypothesis is retained for both hypostheses relevant to this instrument.

HYPOTHESES

Only one of the three instruments provides data which strongly supports either of the two hypotheses.

Data from the observed behaviour instrument reject the null hypothesis that there is no difference between the traditional RNZAF instruction and the combination of traditional and treatment instruction on how to handle problem subordinates. The alternative hypothesis is that the treatment yields a positive benefit in interviewing troublesome subordinates.

The second hypothesis is that there is a significant difference between the traditional instruction/treatment instruction combination and the three part combination of the traditional instruction/treatment instruction/modelling component. The data reported in Table 3 do not permit this hypothesis to be supported and so the null hypothesis is accepted.

TABLE 2

Results of analysis of variance, Observed Behaviour, pre measures

Variable	F Ratio	Control Mean	Control S.D.	Exp 1 Mean	Exp 1 S.D.	Exp 2 Mean	Exp 2 S.D.	Between groups comparison		
Broaches problem in a friendly manner	10.077***	3.70	1.40	5.00	0.51	4.94	0.96	$C<E_1$***	$C<E_2$**	
Listens/empathises with explanation	3.028*	4.18	1.09	4.36	1.18	5.00	1.00		$C<E_2$*	
Asks/allows subordinate's help	4.600**	3.25	0.82	3.37	0.91	4.19	1.35		$C<E_2$**	$E_1<E_2$*
Discusses/notes each idea	0.663	2.88	1.32	2.82	1.48	3.29	1.42			
Decides on action for each	2.368	3.56	0.97	3.91	1.08	4.22	0.74		$C<E_2$*	
Sets specific follow-up date	3.484*	2.71	0.81	2.14	0.30	2.92	1.45	$C>E_1$**		$E_1<E_2$*
Degree of analysis for real problem	5.251**	3.69	0.92	4.04	1.14	4.70	0.90		C<E***	$E_1<E_2$*
Extent subordinate's esteem upheld	3.419*	3.40	1.10	3.51	0.84	4.15	1.02		$C<E_2$*	$E_1<E_2$*
Interviewer's competence/ease	0.757	4.07	1.22	3.96	1.16	4.38	1.06			
Mutuality of agreement	0.570	3.67	1.23	3.85	1.18	4.07	1.09			

*Significant at .05 level; **.01; ***.001; ****.0001

TABLE 2a

Results of analysis of variance, Observed Behaviour, post measures

Variable	F Ratio	Control Mean	Control S.D.	Exp 1 Mean	Exp 1 S.D.	Exp 2 Mean	Exp 2 S.D.	Between groups comparison		
Broaches problem in a friendly manner	18.969****	3.22	1.38	5.21	1.37	5.33	0.68	$C<E_1$***	$C<E_2$***	
Listens/empathises with explanations	32.666****	3.46	1.16	5.68	0.86	5.40	0.71	$C<E_1$***	$C<E_2$***	
Allows/asks for subordinate's help	17.553****	2.66	1.11	5.17	1.53	4.20	1.25	$C<E_1$***	$C<E_2$***	$E_1>E_2$*
Discusses/notes each idea	4.993**	2.94	1.46	4.38	1.64	3.20	1.50	$C<E_1$**		$E_1>E_2$*
Decides on action for each	18.131****	2.94	1.27	4.95	1.25	4.44	0.55	$C<E_1$***	$C<E_2$***	
Sets specific follow-up date	13.436****	2.07	1.08	4.54	1.96	4.32	1.62	$C<E_1$***	$C<E_2$***	
Degree of analysis for real problem	15.417***	3.33	1.36	4.99	1.05	4.99	0.71	$C<E_1$***	$C<E_2$***	
Extent subordinate's esteem upheld	16.259****	2.84	1.18	4.85	1.34	4.33	0.79	$C<E_1$***	$C<E_2$***	
Interviewer's competence/ ease	12.724****	3.18	1.50	5.05	1.26	4.77	0.88	$C<E_1$***	$C<E_2$***	
Mutuality of agreement	13.474****	2.99	1.40	5.03	1.58	4.60	0.67	$C<E_1$***	$C<E_2$***	

TABLE 3

Results of analysis of variance, Observed Behaviour, differences between pre and post measures

Variable	F Ratio	Control Mean	Control S.D.	Exp 1 Mean	Exp 1 S.D.	Exp 2 Mean	Exp 2 S.D.	Between groups comparison		
Broaches problem in a friendly manner	1.566	-0.44	1.92	0.21	1.39	0.39	1.11			
Listens/empathises with explanations	12.320****	-0.75	1.17	1.31	1.29	0.40	1.26	$C<E_1$***	$C<E_2$**	E_1E_2*
Allows/asks for subordinate's help	13.993****	-0.56	1.16	1.79	1.59	0.00	1.47	$C<E_1$***		$E_1>E_2$***
Discusses/notes each idea	4.811**	0.12	1.99	1.55	1.89	-0.09	1.67	$C<E_1$*		$E_1>E_2$**
Decides on action for each	9.181***	-0.71	1.24	1.03	1.55	0.21	0.79	$C<E_1$***	$C<E_2$**	$E_1>E_2$*
Sets specific follow-up date	10.564****	-0.57	1.31	2.40	1.96	1.40	2.34	$C<E_1$***	$C<E_2$**	
Degree of analysis for real problem	5.195**	-0.30	1.32	0.94	1.24	0.28	0.98	$C<E_1$**		$E_1>E_2$.06
Extent subordinate's esteem upheld	9.557***	-0.46	1.17	1.33	1.48	0.18	1.12	$C<E_1$***		$E_1<E_2$**
Interviewers competence/ease	7.728***	-0.83	1.55	1.09	1.75	0.39	1.07	$C<E_1$***	$C<E_2$**	
Mutuality of agreement	7.481***	-0.69	1.32	1.18	1.84	0.53	1.10	$C<E_1$***	$C<E_2$**	

TABLE 3a

Results of Students t-test analysis within groups, Observed Behaviour

Variable	Control						Exp 1						Exp 2					
	T Value	Pre Mean	Pre S.D.	Post Mean	Post S.D.	Signif	T Value	Pre Mean	Pre S.D.	Post Mean	Post S.D.	Signif	T Value	Pre Mean	Pre S.D.	Post Mean	Post S.D.	Signif
Broaches problem in a friendly manner	-0.92	3.81	1.44	3.37	1.39		0.72	5.00	0.51	5.21	1.37		1.61	4.94	0.96	5.33	0.68	
Listens empathises with explanation	-2.55	4.36	1.02	3.61	1.13	Pre>Post*	4.67	4.36	1.18	5.68	0.86	Pre<Post***	1.48	5.00	1.00	5.40	0.71	
Asks/allow subordinate's help	-1.93	3.35	0.80	2.78	1.10		5.15	3.37	0.92	5.17	1.53	Pre<Post***	0.03	4.19	1.35	4.20	1.25	
Discusses/notes each idea	0.25	2.96	1.39	3.08	1.49		3.76	2.82	1.48	4.38	1.64	Pre<Post***	-0.25	3.29	1.42	3.20	1.50	
Decides on action for each	-2.31	3.78	0.76	3.06	1.29	Pre>Post*	3.06	3.91	1.08	4.95	1.25	Pre<Post**	1.24	4.22	0.75	4.44	0.55	
Sets specific follow-up date	-1.76	2.78	0.84	2.21	1.07		5.60	2.14	0.30	4.54	1.96	Pre<Post***	2.75	2.92	1.46	4.32	1.62	Pre<Post**
Degree of analysis for real problem	-0.93	3.80	0.87	3.50	1.30		3.49	4.04	1.14	4.99	1.05	Pre<Post**	1.31	4.70	0.89	4.99	0.72	
Extent subordinate's esteem upheld	-1.58	3.45	1.13	2.99	1.16		4.12	3.51	0.84	4.85	1.34	Pre<Post***	0.74	4.15	1.02	4.33	0.79	
Interviewer's competence/ease	-2.14	4.23	1.12	3.40	1.45	Pre>Post*	2.87	3.96	1.16	5.05	1.26	Pre<Post**	1.67	4.38	1.06	4.77	0.88	
Mutuality of agreement on solution reached	-2.09	3.81	1.10	3.12	1.43	Pre>Post*	2.94	3.85	1.18	5.03	1.58	Pre<Post**	2.22	4.07	1.09	4.60	0.67	Pre<Post*

TABLE 4

Results of analysis of variance, PPQ ratings, pre measures

Variable		F Ratio	Control Mean	Control S.D.	Exp 1 Mean	Exp 1 S.D.	Exp 2 Mean	Exp 2 S.D.	Between groups comparison
Item	1	15.865****	6.05	1.11	4.28	1.14	3.94	1.39	$C>E_1$*** $C>E_2$***
	2	0.922	4.22	2.43	4.52	1.69	5.10	1.91	
	4	4.003*	4.00	1.90	3.42	1.74	2.47	1.21	$C>E_2$** $E_1>E_2$*
	5	0.868	4.66	1.45	4.14	1.42	4.63	1.34	
	6	1.960	2.55	1.65	3.38	0.97	3.26	1.48	
	7	0.342	5.00	1.81	5.38	0.97	5.15	1.50	
	8	0.499	5.05	1.83	4.61	1.43	4.58	1.46	
	9	10.582****	6.61	0.91	5.14	0.79	5.73	1.24	$C>E_1$*** $C>E_2$*
	10	4.759**	5.66	0.97	4.57	1.02	5.15	1.30	$C>E_1$**
	11	0.377	3.55	2.00	3.80	1.28	4.05	1.89	
	12	0.222			4.71	1.30	4.47	1.89	
	13	0.183			5.57	0.92	5.73	1.48	
	14	0.039			2.85	1.15	2.94	1.71	
	15	0.491			4.95	1.53	4.57	1.83	
	16	1.069			2.42	1.12	2.00	1.49	
	17	0.304			4.00	1.62	3.68	1.94	
	19	1.142			3.47	1.28	3.00	1.49	
	20	7.643**			3.85	1.52	2.61	1.24	$E_1>E_2$**
	21	2.710			3.57	1.91	2.63	1.67	
	22	0.648			2.80	1.12	2.47	1.50	
	23	0.177			2.23	1.51	2.47	2.01	
B.O.S.		0.425			110.85	14.00	113.66	12.48	

TABLE 4a

Results of analysis of variance, PPQ ratings, post measures

Variable	F Ratio	Control Mean	Control S.D.	Exp 1 Mean	Exp 1 S.D.	Exp 2 Mean	Exp 2 S.D.	Between groups comparison
Item 1	9.729***	5.77	0.87	4.75	1.06	4.16	1.33	$C>E_1$** $C>E_2$***
2	0.358	4.16	1.97	4.50	1.46	4.00	2.11	
4	4.503**	3.77	1.47	3.25	1.16	2.47	1.23	$C>E_2$** $E_1>E_2$*
5	0.394	4.61	1.53	4.40	1.14	4.76	1.03	
6	2.197	2.66	1.57	3.15	0.98	3.61	1.46	
7	0.438	5.00	1.64	5.15	0.93	4.76	1.09	
8	0.278	4.83	1.61	4.90	0.85	5.11	0.92	
9	5.520**	6.16	1.15	5.10	1.02	5.83	0.85	$C>E_1$** $E_1<E_2$*
10	2.150	5.55	1.24	4.90	0.71	5.35	0.99	
11	1.387	3.66	1.78	4.25	1.33	4.50	1.50	
12	1.793			4.30	1.38	4.88	1.32	
13	1.012			5.60	1.14	5.11	1.81	
14	0.156			3.05	1.35	2.88	1.13	
15	0.546			5.10	1.20	4.77	1.47	
16	0.294			2.35	0.87	2.16	1.20	
17	0.395			3.95	1.39	3.61	1.91	
19	0.098			3.70	1.38	3.55	1.46	
20	0.306			4.00	1.07	3.77	1.39	
21	0.793			3.40	1.27	3.00	1.49	
22	2.491			3.20	1.05	2.61	1.24	
23	0.027			2.80	1.54	2.88	1.77	
B.O.S.	0.085			109.80	14.97	111.06	9.88	

TABLE 5

Results of analysis of variance, PPQ ratings, differences between pre and post measures

		Control		Exp 1		Exp 2		
Variable	F Ratio	Mean	S.D.	Mean	S.D.	Mean	S.D.	Between groups comparison
Item 1	3.230*	-0.27	.89	0.55	1.14	0.22	0.94	$C<E_1$**
2	1.821	-0.05	1.05	-0.05	2.25	-1.05	1.92	$C<E_2$.06
4	0.199	-0.17	1.01	-0.20	1.67	0.05	1.19	
5	0.669	-0.05	0.72	0.35	1.26	0.11	1.16	
6	1.331	0.11	1.07	-0.25	0.96	0.38	1.53	
7	0.513	0.000	0.76	-0.51	0.93	-0.41	1.76	
8	1.797	-0.22	1.00	0.20	1.10	0.53	1.35	
9	1.024	-0.44	1.04	-0.10	1.02	0.05	1.16	
10	0.700	-0.11	0.75	0.25	1.11	0.23	1.20	
11	0.310	0.11	0.75	0.45	1.73	0.50	2.06	
12	1.929			-0.35	1.30	0.33	1.71	
13	1.994			0.00	1.25	-0.66	1.64	
14	0.279			0.30	1.41	0.00	2.05	
15	0.004			0.20	1.47	0.16	1.91	
16	0.144			0.05	1.05	0.22	1.69	
17	0.101			0.10	1.44	-0.11	2.56	
19	0.366			0.20	1.60	0.52	1.69	
20	2.767			0.25	1.61	1.11	1.53	
21	1.373			-0.20	2.11	0.50	1.46	
22	0.123			0.40	1.35	0.22	1.76	
23	0.030			0.60	2.11	0.50	1.29	
B.O.S.	0.056			-1.57	10.49	-2.40	9.34	

TABLE 5a

Results of Students t-test analysis within groups, Pre-Post Questionnaire (PPQ)

		Control (N=20)						Exp 1 (N=21)						Exp 2 (N=21)					
			Pre		Post				Pre		Post				Pre		Post		
Variable		T Value	Mean	S.D.	Mean	S.D.	Signif	T Value	Mean	S.D.	Mean	S.D.	Signif	T Value	Mean	S.D.	Mean	S.D.	Signif
PPQ	1	-1.32	6.05	1.11	5.77	0.87		2.15	4.20	1.10	4.75	1.07	Pre<Post*	1.00	3.94	1.43	4.16	1.33	
	2	- .249	4.22	2.43	4.16	1.97		-0.10	4.55	1.73	4.50	1.46		-2.33	5.05	1.95	4.00	2.11	Pre>Post*
	3	.37	5.11	1.77	5.16	1.83		0.53	4.05	1.54	4.26	1.14		-0.24	4.25	1.69	4.18	1.55	
	4	-..72	4.00	1.90	3.82	1.51		- .53	3.45	1.79	3.25	1.16		0.20	2.41	1.06	2.47	1.23	
	5	- .32	4.66	1.45	4.61	1.53		1.23	4.05	1.39	4.40	1.14		0.42	4.64	1.41	4.76	1.03	
	6	0.44	2.55	1.65	2.66	1.57		-1.16	3.40	.99	3.15	.98		1.07	3.22	1.51	3.61	1.46	
	7	0.00	5.00	1.81	5.00	1.65		- .72	5.30	.92	5.15	.93		-0.96	5.17	1.59	4.76	1.09	
	8	- .94	5.05	1.83	4.83	1.61		0.81	4.70	1.41	4.90	.85		1.52	4.60	1.54	5.13	.99	
	9	-1.81	6.61	.91	6.16	1.15		- .44	5.20	.76	5.10	1.02		.20	5.77	1.26	5.83	.85	
	10	- .62	5.66	.97	5.55	1.24		1.00	4.65	.98	4.90	.71		.81	5.11	1.26	5.35	.99	
	11	0.62	3.55	2.00	3.66	1.78		1.16	3.80	1.32	4.25	1.33		1.03	4.00	1.94	4.50	1.50	
	12							-1.20	4.65	1.30	4.30	1.38		.82	4.55	1.91	4.88	1.32	
	13							0.00	5.60	.94	5.60	1.14		-1.72	5.77	1.51	5.11	1.81	
	14							0.95	2.75	1.07	3.05	1.36		0.00	2.88	1.74	2.88	1.32	
	15							0.61	4.90	1.55	5.10	1.21		.37	4.61	1.88	4.77	1.47	
	16							0.21	2.30	.97	2.35	.87		.55	1.94	1.51	2.16	1.20	
	17							0.32	3.84	1.50	3.94	1.43		-0.18	3.74	1.99	3.61	1.91	
	19							0.56	3.50	1.31	3.70	1.38		1.28	3.00	1.54	3.52	1.50	
	20							.69	3.75	1.48	4.00	1.07		3.00	2.52	1.23	3.64	1.32	Pre<Post**
	21							- .42	3.60	1.95	3.40	1.27		1.45	2.50	1.61	3.00	1.49	
	22							1.32	2.80	1.15	3.20	1.05		.53	2.38	1.50	2.61	1.24	
	23							1.27	2.20	1.54	2.80	1.54		1.64	2.38	2.03	2.86	1.77	
B.O.S.								- .66	110.42	14.24	108.84	14.63		-1.00	113.93	13.05	111.53	10.04	

TABLE 6

Results of analysis of variance, Long Term Questionnaire items

Variable	F Ratio	Control (N=10) Mean	Control (N=10) S.D.	Exp 1 (N=12) Mean	Exp 1 (N=12) S.D.	Exp 2 (N=15) Mean	Exp 2 (N=15) S.D.	Between groups comparison
LTQUIM 1	0.032	1.00	1.24	0.91	1.16	0.86	1.40	
2	0.360	1.66	0.81	2.14	1.34	1.83	0.75	
3	$2.827^{.08}$	1.83	0.40	2.00	0.00	1.50	0.54	$E_1 > E_2$ $^{.07}$
5	4.374*	2.33	0.51	3.00	0.81	1.83	0.75	$E_1 > E_2$ *
6	0.405	3.33	2.06	2.57	1.27	3.16	1.47	
7	1.238	1.16	0.40	1.14	0.37	1.50	0.54	(N = 6, 7, 6, respectively across groups)
9	0.323	1.60	0.54	1.83	0.40	1.71	0.48	
11	$2.827^{.08}$	1.50	0.54	2.00	0.00	1.83	0.40	$C < E_1$ $^{.07}$
13	0.892	1.66	0.51	1.28	0.48	1.50	0.54	
15	1.349	1.44	0.52	1.76	0.43	1.53	0.51	
17	3.274*	1.60	0.51	1.92	0.27	1.93	0.25	$C < E_1$ $^{.09}$ $C < E_2$ $^{.08}$
20	0.022	1.20	0.42	1.23	0.43	1.20	0.41	
LTQSCR 22	0.377	9.62	7.06	12.10	9.30	9.16	3.18	

TABLE 7

Percent frequency distribution for responses on Question 4, Long Term Questionnaire

Question: "Give an indication of the types of interviews you have conducted since the course".

	Control (N=4)	Exp 1 (N=3)	Exp 2 (N=7)
Motivating subordinates	30	43	13
Discipling subordinates	25	3	9
Performance appraisal	8	3	23
Sorting out personal problems	14	27	22
Providing instruction/training	23	24	33
	100%	100%	100%

TABLE 8

Correlational matrix of role play assessment variables using Pearsons R.

	Describe	Listen	Ask	Discuss	Decide	Agree	Analysis	S. self-esteem	I. competence	Agreement
Describe		.80	.60	.40	.70	.50	.70	.70	.80	.75
Listen			.75	.50	.85	.45	.85	.80	.80	.80
Ask				.80	.85	.45	.75	.80	.65	.70
Discuss					.70	.35	.60	.65	.50	.60
Decide						.50	.90	.90	.80	.85
Agree							.45	.45	.50	.50
Analysis								.90	.85	.85
S. self-esteem									.85	.85
I. competence										.85
Agreement										

TABLE 9

Chi Square Analyses for remaining independent variables

i: Number of years of armed forces service

	Years 1	2	3	4	
Control	2	3	4	1	N=10
Course Exp 1	2	6	11	2	N=21
Exp 2	1	5	8	4	N=18

Code to years

1	8 - 10yrs
2	11 - 13
3	14 - 16
4	17+

Means: Control = 2.40
Exp 1 = 2.62
Exp 2 = 2.83
X^2(df=6) 2.85; not significant

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ii Number of years as sergeant

	Years 1	2	3	
Control	5	10	5	N=20
Course Exp 1	5	13	3	N=21
Exp 2	1	16	2	N=19

Code to years

1	2 - 3.5yrs
2	4 - 5.5
3	6+

Means: Control = 2.00
Exp 1 = 1.90
Exp 2 = 2.05
X^2 (df=4) 5.81; not significant

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iii Number of subordinates assigned each trainee

	Subordinates 1	2	3	4	5	6	
Control	5	2	5	1	2	5	N=20
Course Exp 1	Data not obtained						
Exp 2	2	3	8	3	1	1	N=18

X^2 (df=5) 6.08; not significant

Code to subordinates

1	No subordinates
2	1 - 4
3	5 - 10
4	11 - 15
5	16 - 30+
6	Aircrew

TABLE 10

Mean values for Question 3 of the Pre-Post Questionnaire

Control

	a	b	c
Pre	5.11	4.56	5.6
Post	5.16	4.58	5.56

Exp 1

	a	b	c
Pre	4.05	5.10	5.47
Post	4.27	5.21	5.38

Exp 2

	a	b	c
Pre	4.25	4.58	5.11
Post	4.18	5.00	5.10

TABLE 11

Principal Components Analysis results, factor loadings on PPQ items

	Pre measures, all groups			Control posts		E_1 Posts		E_2 Posts	
Factor	1	2	3	1	2	1	2	1	2
Item 1	.618							.716	
2		.512					.628		
4						.530			
5				.744					
6						-0.679			
7				.600					
8		.520					-0.559		
9					-0.558				
10		.639						.509	
11									
12						.634			
13			.638			.493			
14						.450			.578
15	.514					.770			
16									
17									
19								.719	
20							.496		.747
21							.804		.644
22	.611								.610
23									
Eigen values	3.290	2.414	1.951	2.505	1.649	3.976	3.169	4.791	3.834
% variance	26%	19%	15%	33%	22%	41%	33%	28%	22%

DISCUSSION OF RESULTS

PRE RATINGS

Table 4 and Table 2 show the results of an analysis of variance of pre measures on both the PPQ and the observed behaviour instruments respectively. Significant differences across groups are indicated. With such variation, interpretation of pre to post measures as meaning that any differences of results between groups is due to treatment effects, would be suspect. The following is a discussion of the reasons for this variation.

Concerning observed behavioural measures, many of the differences are probably due to learning effects. Courses were conducted in March, April and August. Trainees came from bases throughout New Zealand and returned to those bases and to the same job and rank. Future trainees were drawn from among their colleagues. The needs analysis questionnaire shows that the major informants of what the course required of trainees in order to pass, were their colleagues (Appendix 1, question 3). With having to pass at least 12 of the 15 course components, interviewing troublesome subordinates being one of them, there was considerable motivation to learn from previous trainees. Cue-cards issued to experimental groups would have assisted this and post evaluation sessions were no doubt regarded by trainees as practice sessions for course assessments. Unequal pre measures are therefore not surprising. The standard deviations support this contention, increases noted on three of the six variables.

Referring to Table 2, an increase in the pre measures over the groups from the control group to the first and second experimental groups is indicated on five of the six instructed steps. Any differences

on the last four variables could not be due to intentional learning as they were not instructed but were items of evaluation known to audio-tape raters only. Therefore, variations on these pre measures could mean the uninstructed variables are inherent aspects of the six step treatment. The significant differences across control and first experimental groups on the first and sixth variables ("Broaches problem in a friendly manner" and "Sets follow-up date") could not be due to learning effects as the control group received no treatment. Such variations are most likely related to group differences (such as mood, harmony). It is obvious that trainees, while on a course, react to each other and to course instruction and instructors in varying ways. These reactions develop cliques and differing attitudes (Personal Communication, CTS 1982). Such subtleties are elusive to measure and establish as independent variables. Differing pre measures may reflect these and if they appear on post measures also, it would suggest stable group characteristics.

Table 2a shows the results of analysis of variance of post measures across groups. Significant differences appear on most items. Of the twelve pre measure differences on Table 2, nine are reflected in the post measure table. This would suggest pre measure differences are stable characteristics of the groups. Besides the nine, there are an additional twelve differences in post evaluations on Table 2a. These differences could be only due to effects of treatment between groups.

Table 2a is presented primarily as a test-retest check on the stability of pre measure variations. The suggestion that groups develop different social characteristics that appear on pre measures, could be a plausible explanation for these pre measure results.

Table 9 shows differences between categories for the three groups across the remaining independent variables. These data represent the only personal information obtained for each trainee, No significant differences appear.

Summarising for observed behaviour pre measures differences, the likely cause for such variations are learning effects and unknown group differences.

Concerning the pre-post questionnaire, Table 4 shows that pre measures decrease chronologically across groups, that is, in the opposite direction to those on the observed behaviour scale. This could indicate that the findings of the two scales are contradictory. It is likely that the instruments are measuring quite different dimensions. The questionnaire was designed to cover two main topics of interest to the researcher -- placement on a democratic-authoritarian continuum and self-estimated competence in interviewing troublesome subordinates. Six of the items on the observed behaviour scale simply reflected what was taught; only the remaining four could conceivably correlate with questionnaire results. For example, "Interviewer competence/ confidence" may correlate with the questionnaire competence score. This would not however explain the inverse results. Learning effects could better explain the decreasing questionnaire scores as a greater readiness by successive groups to be honest on a questionnaire which trainees perhaps learned to regard as not being influential on their career and being simply of research use. This is supported by control pre means being higher than experimental group pre means on seven of the eleven questionnaire items in common to all three groups.

Another source of contamination of pre measures is the inconsistent introductions to the two experimenters. Prior to their introduction

and the application of the instruments, both the control and the first experimental group were informed at the start of the three week course of the research project. On the first two groups both the researcher and the base psychologist were greeted with curiosity and a readiness by trainees to listen. Because of uncontrollable and unforeseeable circumstances, the third group was told nothing until the introduction.

The researcher was introduced by a CTS instructor as a "psychiatrist". He thought at the time that trainees would not distinguish between that and a psychologist, so did not correct the mistake. The base psychologist had to spend almost a half hour explaining the purpose of the research (compared to several minutes for the two previous groups). Trainees appeared anxious and angry. After the questionnaire was administered they were even more agitated. The researcher was later told by staff that the questionnaire had upset them. Days later when the first role plays were conducted, trainees were still upset. Their objections to the questionnaire appeared to dwell on aspects of face validity (for example, ambiguity of items).

As no objection had been raised to the questionnaire by the previous two groups, the researcher concluded that introductory inconsistencies were the root of the trainees' concerns. While it is likely that such reaction affected pre evaluations, this cannot be interpreted from the instruments.

Table 4a shows data from the analysis of variance of post measures across groups. Of the eight differences between groups on the pre measures, five are duplicated on post measures. The argument presented above for the observed behaviour scale pre measure differences would appear to be valid for this self-report instrument. Unmeasured groups characteristics appear to be reflected in the two tables. Nevertheless,

post measures reflect remarkably few differences, indicating the instrument is measuring little. Analysis of the standard deviations reflects this with post measures showing lower deviations, indicating minimal learning and regression of responses toward the mean. Such an effect could also contribute to the direction of responses of this instrument.

OBSERVED BEHAVIOUR

The 124 interviews conducted in pre and post role play sessions by the 62 trainees were rated by three observers. (One was replaced by a fourth). They jointly listened to the tapes, presented in random order by the researcher, assessing independently, then agreeing on a consensus score. They practised assessments until a rating of .80 was attained by each. (Moses & Byham '79). They used seven point behaviour anchored scales for each of the ten variables as listed in Appendix 7. Inter-rater reliability was .8435 overall. The range across all four raters was .8205 to .8620. This compares favourably with reliabilities reported in the literature which range from .81 to 1.00 (Twentyman & Zimering '79).

The results of the analysis of variance of pre and post differences across groups are shown in Table 3. The group which received treatment instruction shows significantly greater differences and generally greater standard deviations than the control group on nine out of ten variables. The instructed treatment plus the traditional instruction is superior to the traditional instruction only. (It should be noted that the first six of the ten variables are exactly the six steps taught to trainees. This is in order and is in fact the most commonly used technique for evaluating an instruction according to the review by Twentyman and Zimering '79). It is therefore

not surprising that experimental trainees should perform notably better than control trainees on these behaviours. That they do so to such a significant extent could indicate a strong transfer of training. However, to use a treatment to evaluate itself, leaves findings suspect to contamination from demand characteristics or therapeutic set (Twentyman & Zimering '79). While transfer of training may have occurred, the only true indicator of transfer to "back home" situations would be long term evaluations (Twentyman & Zimering '79).

Looking at the results on Table 3, only the first variable shows no significant difference across means. It would appear that trainees exhibited a consistent degree of friendly introductory behaviour across groups. This is not so. The difference between pre measures on this variable (Table 2) indicates that the control group mean is significantly lower than either of the two experimental groups on this variable ($F(2,55)=10.077$, $p<.001$). This should increase difference between groups but does not because post measures on both experimental groups were not much different from pre measures (Table 3a; $t=0.72$ and $t=1.61$ respectively) and decreased for the control group ($t=0.92$). Therefore, while the first experimental group shows increases on five out of six instructed items their opening remarks to interviewees did not become more cordial after treatment.

Considering control group results, Table 3a shows this group's means to be not only lowest across all groups but control post measures to be actually lower than pre measures. This is reflected in nine out of ten t-tests being negative. The traditional instruction alone therefore had a negative effect on interview skill as indicated by the variables. The researcher suggests this is because the traditional instruction comprised a list of "do's" and "don'ts" -- not an ordered

procedure as the treatment was -- and such a list necessitates time and practice to incorporate into one's interview repertoire. The list may contain knowledge which is valuable and applicable to the trainee's needs but is not reflected in immediate post instruction evaluations. One variable addresses this. Interviewer competence/ease, the ninth variable, was inserted to measure any perceived reduction in interviewer competence and confidence as a result of attempting a new interview format.

Table 3 shows that control group trainees were rated significantly lower on this item compared with both experimental groups ($F(2,55)=7.728, p<.001$). In addition this difference is negative for the control group, confirming the a priori expectation of reduced interview competence for the control group but not for the two experimental groups. This indicates that traditional instruction alone is damaging to interviewer competence and confidence.

While the six step procedure as used in the first experimental group in addition to the traditional treatment shows highly significant results, the same cannot be said for the second experimental group comprising traditional instruction, treatment instruction and modelling. Table 3 shows that the second experimental group differences are greater than control differences on five out of ten variables. But it is not a comparison with control which is relevant to the second hypothesis but a comparison of the two experimental groups. The third column of differences on Table 3 shows the opposite effect from that which was expected on a priori grounds. Trainees receiving instruction plus modelling had significantly lower pre-post differences than trainees receiving instruction only on five out of ten variables with a trend on another.

This negative finding for modelling supports the review summary of Akamatsu and Thelen ('74) that mature subjects do not imitate models. It also addresses conflicting findings on the additivity of components. Some studies have found modelling as an additive component to be an ineffective treatment (McFall and Twentyman '73) while Twentyman and Zimering in their review summarise:

"To be most effective, modelling should be included in a programme consisting of other treatment components." (p.330).

Certainly this experiment finds results contrary to those of Latham and Sarri ('79) on which much of the methodology of this study was based.

A discussion of variables explains the inter-group differences. Table 3 shows the modelling group to be superior to the control group on three of the instructed measures and inferior to the group receiving instruction only, on four. That is, modelling group trainees listened to interviewees better than control trainees but not as well as those of the instruction only group (Variable 2). They asked for or allowed assistance from interviewees on the problem (Variable 3) and gave credit for the interviewees' viewpoints and solutions to a lesser extent than instruction only trainees (Variable 4). Instruction only trainees were less directive than modelling trainees, being more suggestive of action to pursue and more responsive to the interviewees' amendments to such actions (Variable 5). Modelling trainees were good at setting a follow-up date. Even though their post rating was lower than instruction only trainees (Table 3a), this was the only variable on which their learning was not eclipsed by that of the instruction group (S.D. = 1.96 for instruction group, 2.34 for modelling group).

On the uninstructed variables, the greatest degree of analysis for a broader knowledge of the problem was carried out by the first

experimental group ($F(2,55)=5.195, p<.01$). Modelling trainees' improvement in ability to enhance subordinates' self esteem was not as good as that of the instruction only subjects ($F(2,55)=9.557, p<.01$). However, their pre measure on this variable was the highest of the three groups explaining somewhat their lack of improvement (Table 3a). The rating by modelling trainees on their competence and confidence is discussed above. Their rating on the mutuality of agreement (Variable 10) is significantly higher than that of the control group ($F(2,55)=7.481, p<.001$). This point is worth noting even though it does not relate to either hypothesis. It means that on two of the "confidential" rating variables, modelling trainees rated quite well. Possibly the trainees decided before the post interview that they would co-operate with each other in order to complete their interviews quickly and get back to the more relevant classroom instruction; very likely the high results on these two variables are attributable to group differences. Table 9 shows that while there are no significant differences between groups, a greater number of the modelling group trainees had a large number of subordinates and had held the rank of sergeant for four to five and a half years -- longer than trainees of the other two groups. This could be a weak indicator for this group having similar experiences, therefore finding agreement easier.

Summarising the difference between effects of instruction only and instruction and modelling, instruction only trainees were significantly superior to modelling trainees on four out of six instructed variables and on the confidential assessment variables; modelling trainees showed lesser ability to maintain a subordinate's self-esteem with indications of lesser ability to analyse the problem. Modelling when used as an additive component appears detrimental to

learning. But the results discussed here must be considered in light of the modelling group's reaction to the treatment.

Reaction to Treatment: The Second Experimental Group

Following from the discussion in the pre measure section on contaminating influences, the researcher suggests there were various reasons why superior learning did not occur in the second experimental group. Basically, the reasons are related to group disruption, failure of treatment maximisation and inadequate attention to processes of cognition.

The class disruption from the modelling group mentioned above did not stop after pre measures were finalised. On the day of instruction (treatment), the researcher plus a university technician and video equipment arrived for the two hour session. The researcher was to interchange with the CTS instructor on a team-teach basis. Reaction and suspicion was still high as a result of the introduction, days earlier.

Presentation of treatment followed identical lines to that given for the first experimental group. On almost every step trainees questioned the validity (wisdom/worth) of it. For example, step four (discusses/notes each idea) was countered by the argument that SNCO's could not take notes as to leave such personal material in or on their desks was dangerous as they were not the only ones with access to their desks. Only the step regarding the value of a follow-up date drew no dissension.

At one point a trainee addressed the class, saying that what was being taught was so much ".....". He made to throw away a cue card which had been issued on which the steps were printed, but did not.

The researcher spoke for most of these two hours. He felt uneasy when the CTS instructor was not in the room. Control of the class was not lost though. The technician later made the comment that "those boys play rough".

The time to present the video treatment came only minutes before afternoon tea break. The researcher's instruction was;

"Here is a model of how to interview. Let's see what you make of this."

Trainees then viewed the seven minute film. Inadvertently, they were not shown the film twice. If not for the first viewing then certainly for a second, they should have been told to note the statements which ushered in a new step (Byham & Robinson '76, p.25). The afternoon tea break forestalled a second viewing. The researcher did not repair the verbal mistake made in the instruction.

During the viewing, interest in the modelling scenario was intense. Actors were Wigram base personnel, dressed in working clothes, respective to rank, acting on a problem which had once been current at Wigram. The actors were recognised, their merits as NCO's (and hence as models) hotly argued and the problem readily identified with. The dialogue sounded plausible, being adapted by the actors to their idiosyncrasies of speech, and was seldom ridiculed. All the components for a successful modelling treatment according to Goldstein & Sorcher ('74), appeared to be present. After the end of the course instructors told the researcher that the video had been reported to them as being worthwhile; that it had been interesting "to see how it was really done".

Following the afternoon tea break, all trainees carried out role-play practice sessions in one room for one and a half hours. This was under the control of the CTS instructor, using CTS role-play scenarios,

the actors being randomly "volunteered" by him. During one role-play, a trainee experienced some difficulty in handling his subordinate. He took out his card and followed the steps precisely. His performance was greeted by a warm ovation. This performance, the researcher suggests, was a model itself. It could only have enhanced the instruction plus modelling treatment.

There was one more disruption which may have flawed the measurement of treatment effects. Post role-play sessions were inadvertently scheduled for a period when instruction was being given in class which was of high interest and relevance to the trainees. The role-play meant that each of the 21 trainees had to leave the class twice for five to fifteen minute intervals. Instructors reported later that trainees were considerably annoyed at this intrusion on a valued instructional period. This may have accounted considerably for lower post measures values than might otherwise have been obtained.

With regard to cognitive confounding variables; with hindsight, the researcher now questions whether the intended but unuttered video observance instruction would have been adequate. Decker ('80) and Decker ('82) investigated the use of more elaborate learning retention processes. He tested formalised retention processes against subject spontaneous retention processes in instructing a programme similar to the researcher's to first line supervisors. The formalised retention processes consisted of symbolic rehearsal and symbolic coding. Rehearsal merely involved trainees imagining performing the steps with their eyes closed. Coding involved rewriting the steps from memory after seeing the film twice. Spontaneous retention carried no instruction and so was the same as that performed by the researcher -- inadvertently. Decker found symbolic rehearsal and coding were superior to spontaneous retention. The dependent variable was similar to the researcher's in

that it involved generalising of training to a novel scenario. Unfortunately he does not state what time was allowed for the rehearsal phase. This could be critical. The authenticity of actors and scenario could become of secondary importance if time and instruction allows subjects to adapt the observed behaviour to their own situations and their own personalities. His instructions preceding modelling could well be superior to those of Byham & Robinson ('76). However, introduction of such cognitive aspects violates the definitional boundary of "social skills" suggested by Curran ('79).

The treatment used in the present experiment is not beyond criticism. It must be remembered that this is not a test of modelling per se, but a test of instruction and modelling versus instruction only. It is therefore anticipated that there will be interactive effects of the two components of the treatment. While a negative effect as found here was not anticipated, it is possible that such a result is due to inter-active effects (McFall & Twentyman '73, and McFall & Galbraith '78).

Perhaps a better treatment is that suggested by Bruch ('78). He suggests that while the two components may have distinct differences, the two can be merged to produce an effective treatment. He maintains such a treatment should be based on the demonstrated cognitions of the model, Marlatt ('72) defines instructions as a deductive process which provides rules on how to behave correctly and modelling as an inductive process which provides only examples of how to behave correctly. Bruch queries this distinction. He maintains that subtle behavioural cues which are indicative of cognitions are often overlooked by psychologists producing modelling films.

evaluation sessions. (Berger & Johnasen '68, Bruch '75, Bruch '78).

Validity of the Instrument

A problem recognised in this experiment is the confounding effects of using training material as an assessment device. Results can be confounded by demand characteristics placed on trainees to evaluate themselves and therefore validation of instrument is necessary (Twentyman & Zimering '79). Hersen & Bellack ('77) have noted:

"Little consideration has been given to the fact that most measurement procedures have been developed in the context of treatment studies and without adequate psychometric control. The evaluation of both the assessment devices and treatment procedures is therefore quite difficult as they must serve as criteria for one another. If pre to post treatment changes are found, one possible conclusion is that treatment is effective and the device is valid. However, without independent information about the reliability and validity of the assessment device, that conclusion cannot be safely drawn." (p.345)

The inter rater reliability for this instrument is reported above as .84. This level is adequate for this type of social skill assessment and is comparable with other research of a similar nature (Twentyman & Zimering '79 p.348).

While no particular validity tests have been made, a measure of inter-correlation of assessment items would give an indication of item homogeneity. Table 8 is a matrix of correlations of the ten assessment variables, all significant at the .0001 level. Range is from .35 to .95. Apart from variable 6, all items appear to be measuring much the same thing. Many correlations are quite high indicating also that there is little discriminability between those items. Inspection of the items shows that content validity appears to be satisfactory as all the items appear to be closely related to the intended content.

PRE POST QUESTIONNAIRE

This comprises an attitude scale and a behaviour observation scale, (BOS).

Questionnaire items are discussed individually because the totalled attitude scale score reveals little difference between means.

The differences between pre and post means were evaluated across groups by a oneway analysis of variance. Results are shown in Table 5. Differences within groups were analysed by Students t-tests. Results of this analysis are shown in Table 5a. The item after item 23 is the BOS scale result.

Attitude Scale

With regard to the analysis of variance across groups, Table 5 shows the first item to be the only one indicating a significant difference across groups ($F(2,53)=3.230$, $p<.01$). The control group shows significantly less change on this item than the first experimental group. Trainees in the first experimental group indicated an improved self-assessed capability after training to remedy problems associated with subordinates' poor work performance. This was the aim of the treatment, and, if this item is valid, it is a positive result. It is also noteworthy that the scores on this item decreased sharply over the three courses (Table 5a). The likely causes for such a decrease have been discussed above. But results in the control group are the only ones to be negative ($t=-1.32$). Standard deviation is also the lowest indicating uniformity of belief. A non significant decrease is therefore indicated in trainees' self perceived capability to handle troublesome subordinates after the traditional instruction. The finding on this item on this instrument parallels the finding of negative results in the observed behaviour questionnaire.

The second item was considered a priori to be important in determining the latitude trainees had in adopting what is primarily a civilian personnel pattern to a military environment. The researcher's supposition is that trainees will initially agree with the statement "It is not RNZAF practice to ask a subordinate for solutions to problems about people." If the treatment is successfully conveyed, trainees should perceive the democratic approach as being applicable and yet not undermining military mores. Results here, therefore, will necessarily be negative. Table 5a shows that the second experimental group changed their minds the most on this item. This is surprising in light of the reaction by the group to the treatment. Their pre measure value was the highest of all six measures; their post measure value the lowest. Table 5 shows this difference to be a strong trend when compared to the control group ($p<.06$).

Item 3 was designed to measure any change perceived by trainees as to the source of their knowledge. Results are reported in Table 10. No analysis has been done as results from pre to post measures are too similar. However, greatest variation is shown for the first experimental group.

Item 20 was assumed to typify the attitude of an authoritarian NCO. If this item has been interpreted by trainees correctly then their higher post treatment ratings by the second experimental group would indicate a slight increase in belief of the efficacy of authoritarian problem solving techniques ($p<.01$). In light of reaction to the treatment, this is understandable. Other items intended to measure this authoritarian concept should therefore also show confirmation of this, even if small. Items 12, 14, 15 and 22 do just this (Table 5). But an increased readiness to listen to a

subordinate and consider his viewpoint is also indicated (Items 11 and 17). The reason why they might do this could be that in the past, only temporary improvements have been obtained by use of previous interview techniques. (Item 6)

This result is interesting. Trainees have indicated that they are prepared to listen to a subordinate's viewpoint but once a solution is obtained, will use firm measures to enforce action. The reason why they might do this could be that accepting a subordinate's idea could undermine their authority. (Item 16) The treatment attempted to convey the value of eliciting the subordinate's assistance to a greater extent in solving the problem, and relinquishing use of authority in such a situation. This pattern of results could indicate adaptation of the treatment by trainees to their needs, providing a compromise of the (essentially American and civilian) programme to the New Zealand military.

No such pattern exists for the first experimental group or control group.

In considering the marginal results of this instrument, three matters arise.

Firstly, with regard to the low level of change from pre to post measures, Goldstein and Sorcher ('79) hold that attitude change need not be instigated to effect behaviour change.

"Importantly, the thrust and distinguishing characteristic of this supervisor development approach is not to directly change attitudes but to first change behaviour in various situations. Eventually, attitudes should fall into line with changed behaviour....." (p.37)

In light of this attitude scale result, the question arises, "When?" In this experiment there has been no significant attitude

change even though behaviour change has occurred. Possibly, application of the questionnaire after some months may have yielded more positive results. On the other hand, to obtain changes within the course may instead reflect an instability of trainees' social beliefs.

Secondly, a flaw to using the pre-post self report questionnaire is the changed scale of knowledge which occurs in the course of treatment, labelled "response shift bias" (Mezoff '81).

Mezoff points out that conventional pre-post testing tends to be inaccurate because participants typically over-estimate self reports of knowledge, skill or awareness on the pre-test. The training influences the participants' reference frame with respect to the item in question; therefore, pre-post comparisons are not entirely legitimate since the reference frame at pre is often different to the reference frame at post. Pre-post comparisons commit the error of presuming a uniform reference frame for each participant (pre to post) where one may not exist. This method can sometimes bias against documenting real change and tends to underestimate training benefits. (Mezoff '81)

His solution is to ask trainees at the post evaluation session to rate beside each post item their perception <u>then</u> of how they <u>should</u> have rated themselves on the pre measure, considering their now expanded field of knowledge.

Bearing in mind the possibility of psychometric difficulties arising, it had been intended that this "pre-then-post" technique (as Mezoff '81 calls it) would be implemented in the present study. It could have yielded more positive results. It was abandoned because of the difficulties of conducting three evaluations over three groups per course. Abandoning the subordinates' and superiors' questionnaire eased the task but did not resurrect the pre-then-post questionnaire.

Thirdly, another flaw worth noting is that the attitude questionnaire contains items designed to evaluate interview competence and location on a democratic-autocratic continuum. Certain subjects have been favoured in self-report research such as assertiveness, authoritarianism and modelling (Epstein '66), aggression and modelling (Karst '67), and the respression-sensitisation dimension (Kaplan, Simon and Ditrich '70). To generate a self-report scale to evaluate competence of supervisors could be to invite massive error due to response bias. Not only has self-assessed competence not been dealt with much in attitudinal assessment literature, but the zone of competence has to be clearly defined. The broader a behavioural category such as assertiveness is conceptualised, the more difficult it will be to predict behaviour from an assessment device. (Twentyman & Zimering '79, p.34)

It was partly for this reason that after the March course the number of items was doubled.

Principle Components Analysis

As items in the pre post questionnaire (PPQ) showed little change from pre to post measures, a Principal Components analysis (Nie et al '75) was carried out to determine whether underlying factors indicated any change in responses of the questionnaire. (As items of the questionnaire correlated low with each other, an analysis could not be done to establish factors which could be used as independent variables for analysis of variance tests, as done by Burnaska '76). Analyses were done on pre measures from all three groups and separately for post measures of each group.

Pre measure factors -- Of an initial seven factors, three factors emerged for the pre measures which accounted for 60% of the

total variance. (Table 11) They were:

1. Confidence in solving poor work performance by use of stern measures;

2. A lack of confidence in handling personal/work related difficulties and understanding them;

3. Favouring subordinate's involvement in problems concerning them.

Post measure factors -- Analyses were done for each group on the post test evaluations. Two clear factors emerged for each group. They were;

Control -

1. A perceived understanding of subordinates but with a low tolerance for mistakes;

2. Low listening ability

Instruction only -

1. More choice perceived in effecting a permanent improvement in subordinate's behaviour from interviews, by maintaining authority but tolerating democratic skills;

2. A readiness to ask subordinates for their views, more tolerance of other's problems.

Modelling plus instruction -

1. Confidence in handling troublesome subordinates by use of authority; the subordinate being essentially at fault;

2. Reliance on authority.

The essential psychological difference between groups lies between the first factors of the two experimental groups. The instruction only group learned the utility of democratic skills; the modelling group relied on the traditional "pull up your socks" technique.

Table 11 shows factor loadings on items of the questionnaire. The variation across the post measures shows that there is a change in the pattern of group inter-relationships. Examination of changes in correlation of items across groups could clarify the factors further. However, the low N numbers of each group make it unlikely that the factor analysis is robust enough to conclude anything substantial.

Behaviour Observation Scale (BOS).

No treatment effect was found. The scale was developed in line with recommendations by Latham, Fay & Saari ('79). Flight Lieutenants, Flight Sergeants and airmen were canvassed for the 204 items which constituted the pool. The researcher suggests that this may be a source of error in the development of the scale. The requirement was to develop effective and ineffective behaviours of an SNCO. A superior may see effective behaviours as being quite the opposite to that perceived by a subordinate. For example, an officer may approve of an airman being upbraided for a misdemeanour; the admonishing Flight Sergeant may see the necessity of tempering his criticism to sustain shop-floor harmony; the airman may prefer to be informed of his mistake and his self-respect retained. Such an item could be "I sometimes discipline a subordinate in front of his peers or subordinates to make an example of him". Selection of items from three such groups would generate a scale with subsets of items relevant to each rank. Analysis of the scale with this in mind would therefore be relevant if all three ranks are surveyed. Only the rank of trainee Flight Sergeant was surveyed however, generating therefore an averaging effect of all items. The researcher suggests items should have been collected from trainee peers only.

Categorisation of items could be a source of error. In the experiment by Latham, Fay and Saari ('79) one of the authors carried

out this task. In the present research the same was done. Curran ('79) recommends that raters who are familiar with the value system of trainees, rate results. Latham, Fay and Saari argue over whether another such as job incumbent should do this function and maintain that the difference in result has yet to be empirically justified. Perhaps the present results are justification for using an incumbent.

Error due to response bias (as raised above) is applicable to this scale also.

Finally the scale as applied has predictably limited value. It was to be used in the subordinates' and superiors' questionnaires on a pre and long term basis (Latham, Fay & Saari '79) where it could have been reasonably expected to show better results.

Concluding, better results may have been obtained if questionnaires for a particular rank had been developed from behavioural items generated by holders of that rank.

LONG TERM QUESTIONNAIRE

The long term questionnaire was administered through the air force postal service two months after the end of each course. The return rate was 38/62 or 61%. Table 6 is a summary of results.

Only the difference in means between the first experimental groups and the second experimental group on Item 5 reach any level of significance, ($F(2,16)=4.374$, $p<.05$) with a strong trend being indicated on Item 17 for both groups ($F(2,35)=3.274$, $p<.05$). Because N levels are very low for Items 2 to 13, it is reasonable to discuss trends.

Both experimental groups considered the new skills as significantly applicable to their SNCO duties (Item 17) but most perceived that their SNCO skills were not changed to any great extent by the treatment (Item 15). It is apparent that for both experimental groups there was some transfer of learning to the back home environment.

Item 5 indicates that the first experimental group used new techniques more than old techniques in interviews conducted since the course, more so than the second experimental group. A trend for Item 11 ($p<.07$) indicates the first experimental group had initiated interviews more often than the second experimental group, possibly indicating an increased self confidence in interview skills ($p.<07$).

The types of interviews conducted are indicated by Table 7, which is a summary of Item 4. The researcher's supposition about increased confidence is reinforced by the large motivation content listed by trainees of the first experimental group in their interviews (43%). A complementary figure is the low disciplining content indicated by the same trainees (3%). The second experimental group trainees also indicate a low discipline factor in interviews compared to controls (9% of 25%). However, considering N levels are so low, no serious extrapolation of these results to the total groups is suggested.

These findings support the first hypothesis with no support being offered the second hypothesis.

SUMMARY OF DISCUSSION

Of the two hypotheses, considerable support was offered by results for the efficacy of the treatment instruction as a superior interview technique compared to the traditional instruction. There is less evidence for the hypothesis that modelling enhances instruction. This finding agrees with most literature on modelling on such subjects, but disagrees with other applications of the programme. There is some evidence that the traditional instruction has a negative effect on interviewer skill.

Differences on pre ratings between groups are considered for both the role-play evaluation and the PPQ. Learning effects and

inconsistent introductions are suggested as prime causes of these differences. The few independent measures collected indicate no differences in subjects between groups.

Significant results from role-play assessments are discussed with particular emphasis being placed on the four confidential assessment variables. The best results are indicated by the instruction only group and it appears modelling trainees rejected treatment to some extent and relied on a directive or authoritarian approach in their interviews. However, their initial listening skill was very good. Their more critical assessment of the treatment, while it did not yield highest results, may produce a more acceptable application of the treatment to military conditions.

Contaminating influences to both the assessment and the treatment are discussed. These include trainees' reactions and failure of maximisation of treatment. Suggestions are made for improving the modelling treatment by increasing the cognitive component in the dialogue. Inconsistent introductions to the researchers and their programme are seen as being particularly responsible for lesser results despite the addition of the modelling treatment. Validity of the role-play assessment is discussed.

The pre-post questionnaire (PPQ) contained few items showing significant differences in its attitude scale. A composite single figure score was therefore not obtainable, so significant items were discussed. These support and amplify the role-play results with indications of improved self assessed interview ability by treatment trainees, variations of opinion between treatment groups on how trainees viewed subordinates' contributions to interviews and an affirmation, particularly by modelling groups, of the value of authoritarian management techniques. Three faults to the attitude scale are discussed.

The behaviour observation scale was not analysed and two likely flaws to the recommended method of constructing the scale are discussed.

The long term questionnaire (LTQ). with predictably low N numbers and significance levels, nevertheless provided indications of instruction group trainees using new interview techniques, being more prepared to initiate interviews with back-home subordinates and indicating an emphasis on motivational interviews in preference to disciplinarian ones.

Overall, there is enough evidence to suggest a positive effect of both treatments compared to controls. Modelling could be a superfluous component to the programme, but with varying pre measures, and contaminating influences on both treatment and evaluation, this recommendation is only tentative.

CONCLUSION

The first of the hypotheses concerned whether the programme contents are superior to the traditional instruction used at the Command Training School, Wigram, in improving interview skills. The experiment produces much evidence that the new instruction is superior. On all variables of rated role-playing, both experimental groups showed better ability than controls to listen, consider the interviewee's viewpoint, enhance his self esteem, reach agreement with him and analyse the problem better. Only the variable of interviewing in a friendly manner showed control subjects exhibiting a lesser difference. The two self report questionnaires indicate the experimental group trainees believed they derived more from the treatment conditions, regardless of the modelling component.

Regarding modelling, one must question its contribution to the package in light of the results. This experiment attempted to maximise the use of instruction to a greater extent than had the six other experiments which have been carried out on the package. Bearing in mind the disruptive influences to the treatment and the evaluation of the modelling treatment group, it appears modelling is superfluous to the package. Some caveats remain.

Firstly, there is no indication from these results that accurate inculcation of what the organisation regards as legitimate use of the skills is not conveyed by modelling -- it would be much more difficult to convey this by instruction only. Secondly, in an organisation where instructors are not necessarily experts in the field which they teach and where education "modules" are rotated periodically, a permanent video representation of the skills provides an obvious and necessary consistency of instruction.

It would appear though that the use of or dispensing with modelling can be determined by the characteristics of the subject group. In line with the reasoning of Olsen ('72), informational density can be regulated by choosing reinforcement, modelling or verbal instruction based presentations. He says that good instruction is a matter of optimally arranging the two functions of trainees' intellectual capability and informational density. It would appear from the literature that the intellectual capability of trainees includes relative maturity, competence within the organisation, self esteem, previous success in interviewing, numbers of subordinates, anxiety and need for social approval. An assessment of these factors within supervisor groups of organisations and the matching to an appropriate instructional mode is obviously the key to the effective use of modelling.

A point of irony arises in the whole programme, the researcher suggests. Democratic skills, obviously teaching trust in soliciting an interviewee's suggestions, and involving a loosening of control of the direction of the interview by the interviewer, are taught by the programme contents. The method by which this is conveyed is a package emphasising four processes of learning, one of which, modelling, conveys <u>one</u> example of how to apply the contents; that is, there is ipso facto only <u>one</u> manner by which the steps can be applied. This appears to be a very directive educational method, with no utilisation made at all of trainees suggestions or initiative, except as reinforcement from each other in role playing for conforming closest to the modelled display. Simply, the instructional package does not convey by example, the contents. It is instead contradictory. An alternative is suggested by the researcher.

If the three elements that form the introductory module (Byham and Robinson '76) and are claimed to be basis for all modules (Rich '78) are considered, viz:

* Ask the subordinate for his solution to a presenting problem;
* empathise with his explanation;
* enhance his self esteem; these represent the basis for development of module steps. The researcher suggests these elements have an intuitive appeal or face validity and are readily understandable. Why should they programme not allow trainees to develop their own sequence of steps from them? This would appear to be a better technique for both eliciting and teaching faith in a subordinate's initiative and innovation. The technique would have six advantages.

1. The 20 scenarios acted in class, would provide 20 examples of application of the elements;
2. the secenarios would be drawn from "back home" experiences and therefore be more conducive for observers to transfer of learning than those written by researchers;
3. the scenarios are likely to draw on present difficulties that the trainee is encountering and thereby allow him to resolve these in class with the help of the instructor and trainee peers;
4. limitations to the programme can be discussed;
5. all scenarios would be replications of acceptable organisational "face";
6. the exercise would be for trainees a creative lesson in the development and application of democratic skills.

There could also be disadvantages. The instructor may perceive

that he has less control over his class. It is also possible that role-plays generated may be superficial and trite; or repetitive. Trainees with good imaginative ability would write the best scenarios and therefore assessments based on such role-plays would be unfair.

The last part of the conclusion concerns the assessment instruments. Instruments should be selected for their appropriateness to the programme. Instructing one module only does not bring about the broad results that a 20 module programme such as commonly used by, for example, Byham and Robinson ('76), would. Instruments for a single module should be capable of evaluating changes in a skill, or behaviour that may be practised by a trainee or observed by a subordinate possibly only once a month. Instruments such as the BOS that collects data on effective and ineffective behaviours of supervisors appears more appropriate for global changes in behaviour that may result from the supervisor trainee's entire interpersonal approach being changed.

With this in mind, self reports are obviously important. Attitude scales appear to have little value because attitude appears not to change. But questions that are clear and free of ambiguity appear to produce good results despite their obviousness. A self report questionnaire of less than ten items, each covering a dimension of concern, such as interview competence, appears more effective than a battery of multi-item instruments. Such an instrument, if applied to supervisors or subordinates of trainees would be less taxing on their patience, and hence have greater face validity. Such instruments are more commonly used in applied settings.

A self report scale of critical behaviours as used in Item 15 of the long term questionnaire appears to be able to develop the necessary sensitivity to such molecular change.

The role-play assessment produces impressive results, aided by demand characteristics of the treatment and experimenter bias. A true indication of behaviour change is unknown because of these influences. Instead, the role-play may be more beneficial as a practice exercise. While its contribution is questioned, dispensing with it leaves self report instruments without corroboration. After all, results from this instrument in this experiment matched those of both the PPQ and LTQ. As is, its use could be streamlined. Dispensing with the use of the instruction as dependent variables and emphasising instead the four uninstructed variables (and others such as used by Burnaska '76) is suggested.

While not removing the influence of demand characteristics and experimenter bias, such variables give a fairer assessment of the control group.

McGehee and Tullar ('78) question whether behaviour modelling as an industrial training method may have become "a sacred cow, impervious to scientific evaluation". The researcher concludes that this experiment questions the modelling basis of the programme. Further research comparing instruction to modelling and relating those treatments to subject characteristics should effectively inhibit the programme from achieving that unenviable bovine status.

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APPENDIX 1

NEEDS ANALYSIS QUESTIONNAIRE

Results of questionnaire for entrants to the
NCO Management Course, 1982.

(1) How would you describe your present expectations of the course?

No response*

Refresher of JNCO **

To learn man management and admin ***

Confidence builder/new duties exercise *

A necessary course to pass ****

Maybe something learnable ****

Worthwhile course **

Apprehension

Logical, practical

Sceptical re aircrew application

(2) Have you heard from any of your superiors, their estimation of the worth of the course?

Yes ********** No **********

(2b) If 'Yes' to the above question, briefly describe their attitude?

No response **********

Useful in some aspects ***

Practical and rewarding

Open mind necessary

Half beneficial; half rubbish *

Has to be done ***

Footnote; * denotes frequency of responses.

(3) Have you heard from any of your peers, their estimate of the worth of the course?

Yes ********** No ****

(3b) What is their attitude briefly?

No comment *****

Well run, most enjoyable

Worthwhile

Necessary for promotion **

Half OK, half say useless **

Some bits are useful *****

Socially rewarding

Highly recommended *

A useful revision course *

Disproportionate time spent in areas not normally concerned with 'normal' everyday life.

(4) From the following course objectives, indicate the relevance which you see or expect each to have for you:

	Consid	Mod	Little
(a) Performing routine admin duties as NCOIC a flight -	*****	***** ***	***** **
(b) Solving work problems and planning work	***** ****	***** *	***** *
(c) Improving work methods	***** *****	***** *	*****
(d) Interviewing / briefing staff	***** *****	***** ****	****
(e) Performing duties of a UWO at an orderly room	*	***** *	***** ***** *****
(f) Performing duties of a flight sergeant or SWO on parade	***** *	***** ****	***** *
(g) Organising, conducting and participating in discussion groups	***** *	***** ****	*****
(h) Performing duties as NCOIC:			
i A flight deployed in base defence	*	**	***** ***** ***** *
ii A passive defence unit	*	**	***** ***** ***** *
iii Parade drill	****	***** ****	***** **
(i) Communicating clearly in oral form	***** ***** ***	*****	**

(5) In each of the following aspects of management, indicate your own estimate of your competence (circle appropriate strength number) -

(a) Maintaining authority over subordinate in a combat situation

No troubles 1 2 3 4 5 6 7 Have difficulties

1	2	3	4	5	6	7
	**	***	***	***		
		***	***	**		
			*			

(b) Group discussions

1	2	3	4	5	6	7
	***	***	***	***		
		*	***	*		
			***			
			*			

(c) Parade ground authority

1	2	3	4	5	6	7
	***	**	***	***	***	
			***	***	*	

(d) Handling problem subordinates

1	2	3	4	5	6	7
*	*	***	***	***		
		***	***	**		
		**	*			

(e) Deriving clear instructions from superiors

1	2	3	4	5	6	7
**	***	**	***			
	***		***			
	*		***			
			*			

(f) Distinguishing between your personal management functions and the demands of the service

No troubles 1 2 3 4 5 6 7 Have difficulties

1	2	3	4	5	6	7
*	***	**	***	***	*	
			***			
			***			
			**			

(6) Which features of the course do you expect will be the most important for your future position?

Clear oral communication ***

Service writing **

Improving work methods ***

Planning work ***

Briefing of staff ***

Management ******

Interviews ***

Admin ***

Drill

Discussion group organising etc

Answer later

(7) Which features do you anticipate may not be relevant or maybe repetitive of previous training?

No answer

Roles of Forces security

Ground defence ********

Solving work problems and planning work

Drill ***

Passive defence *******

All relevant *

(8) Does your present management position present any difficulties which you expect the course to cover?

Yes ******** No **********

If 'Yes' - elaborate:

Assertiveness

Staff briefing

Work planning

Interviewing

Law

To overcome lack of spirit in my section

Management of subordinates during routine cat. checks etc

Orderly room procedures *

Management of limited manpower

Drill

Organising discussion groups

(9) Does your present management position present any difficulties which you would expect a training course may not but should cover?

Yes ** No **********

If 'Yes' elaborate:

How to deal with ineffective superiors adequately

Civilian management

APPENDIX 2

Text given to both treatment groups as instruction component:

What is a troublesome subordinate?

Introduction

Your concern with a troublesome subordinate is related directly to his job performance. What he adopts as a solution to a personal problem may not be your concern but the effect which it has on his work is your concern. Therefore you are entitled to intervene on this basis.

What are the features of recruit airmen today compared to 15 years ago?

What difficulties do we face in improving subordinate performance?

What do you men seek for yourselves from your subordinates?

OK. Morale, work performance, cohesion, personal problems -- we can do something to influence these things. Not by learning solutions in class but by adopting a procedure for constructive interviewing.

Style of Command

You are all military personnel. You have all been trained in aspects of one style of management -- the authoritarian type, which relies on command. There is a place for this style; but it is only one side of the coin of effective man management. The other is the listening skill which is embodied in the democratic style.

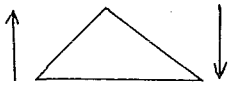
Consider AC Jones whose wife has recently left him, daughter has become pregnant, he has failed his course and his work is going downhill.

"Come in Jones. Sit down. Your work is lousy. Tell me your troubles".

What is his reaction? Yes, he will clam up; because of two reasons. You are being critical of him personally and your attitude is domineering with no promise to him of impartial consideration of his faults.

I would like to illustrate this authoritarian - democratic thing a little further. Let us take a leaf from industrial psychology.

The authoritarian command style, (embodied in the pyramidal command style as ), is best for situations of, for example war, because it maintains a tight control of all individuals which is necessary for cohesion of units. That is, command functions downwards from the higher authority  . But it pays no attention to individuals' interests.

Compare it to the democratic style which is less authoritarian with the higher authority being in closer contact with his subordinates; and is typified by two way communication.  This style is becoming more popular in industries using high technology, highly educated workers, changing technology etc and often leads to greater productivity, reduced staff turnover; work satisfaction, higher morale etc. A point against this system is that it induces a slow moving command system.

Note that I am not talking of democratic military command but for the benefits from style of command if used judiciously. Take computer manufacturing companies; the instrument checking workshop at Harewood. The people working there have good brains. Why not use them to get them to help solve problems which you have in common.

Aim

The aim of this instruction is to teach you how to improve a subordinate's performance and problem solve by adopting a particular interview pattern. There are three basic elements which underly the interview structure and these apply to any interpersonal interaction.

The Elements

A. Maintain or enhance the subordinate's self-esteem.

This means his pride. The best way to do this is to respect his suggestions, efforts etc. Do not override him with your authority. Recognise that he has equal rights to job satisfaction as you. You can pull his spirits up by allowing him to talk and by accepting his viewpoint.

B. Listen and respond to the subordinate with empathy.

This does not mean sympathy. It means to cotton on to what he is feeling. If he is angry, say; "You're pretty angry eh?". Show you are listening by using such comments as "I understand", "Let me rephrase what you're saying to see if I have it right", "It seems to me that ....." and "Uh huh". Try to forget about your own sensitivities if you can. You are not there primarily to assert yourself but are trying to be an effective supervisor by understanding your subordinate.

C. Ask the subordinate for help in solving the problem.

You can bet he had it for a lot longer before it came to your attention so he'll have solutions to it already. He'll also be wound up emotionally, therefore some solutions may be rubbish. You can help unravel the ideas. Discuss both your and his solutions. Perhaps you both have the same goals but just different solutions.

OK. Let us now look at the six step interview procedure which is printed on these cards which I will now issue.

1. Describe Problem in a Friendly Manner

Do not shoot him down at the start but give him the benefit of the doubt. Being brusque forces self-esteem protection, not problem focus. You do not have to be chummy or unnatural. If you are hungover or moody, then be so. There will always be an opportunity in the interview to explain yourself. But the important point is to focus on the problem, not the subordinate. Do not try to force an admission of guilt. Your duty is to locate the problem, not his reaction to it.

2. Listen and empathise with his explanations

This has been largely covered above. Try to understand how he feels. He'll want to explain himself, redress his self esteem. Let him.

3. Ask for his help in solving the problem

He may be surprised, even flattered. Give him time to get back on his chair. Point out he has been immersed in the problem for longer than you, therefore must have some ideas. Asking for help does not mean relinquishing your authority -- you are still controlling the situation. You will have your solutions mapped out and he will have too. Maybe his solution is more helpful to the problem and your section's morale and more enhancing of your problem solving reputation.

4. Discuss and write down each appropriate idea

Sort out the wheat from the chaff of the solutions. Some will not be feasible to apply; say why not. Writing down conveys to him that the problem is being taken seriously. Also, you may need notes to fall back on if the first solution tried does not work and if new ones are to be tried.

5. Decide on specific action to be taken by each of you

Some actions only you can adopt, some only he can, so clarify exactly what each of you both are to do; do not push for an immediate solution but take the interview as it unfolds. Complex problems do not have ready answers; simple ones may have, so discuss them. If you can attain only likely solutions, shelve the matter for a day or two and let it gel.

6. Agree on a specific follow-up date

This is most necessary as it shows you are keen to help. As good solutions may not be ready at hand, do not get stuck in a groove of obstinacy. With discussion, both your views will change and mature and you should allow for this. Recognise that discussion is often the single greatest aid to a person whose problems have overwhelmed them. The follow-up is necessary to discuss progress and to try new solutions.

Concluding, I think you will find this structure beneficial -- if you are interested in the welfare of your subordinates and their work performance

APPENDIX 3

INTERVIEW ROLE :1: SUPERVISOR

You are a Flight Sergeant supervising an accounts section. Morale in the section is not particularly high as there has been inconsistent direction from the Officer Commanding the Squadron which has resulted in confusion and discontent. Your Sergeant has spoken to you about the performance of Corporal Jones who has been making a large number of errors in his checking of pay PONS. He fluctuates between missing errors which are present or sending back PONS which have been correctly completed. The pay staff are becoming increasingly annoyed and several loud and bitter arguments have occurred. Corporal Jones has been with the section for five months, he is thirty and married with two children. You had Corporal Jones on your staff four years ago at a different base. During this time he was an even tempered, valuable worker.

You decide to call Corporal Jones in to interview him with a view to encouraging him to improve his performance at work.

INTERVIEW ROLE :1: SUBORDINATE

You are Corporal Jones and have been working in the accounts section for about five months. You find working in the section unpleasant and find that you have been arguing more at home and becoming disinterested at work. The main problem is that you have been receiving a number of conflicting instructions from the Officer Commanding who has directed you to use unorthodox procedures and has subsequently admonished you for failing to follow the official methods. On one occasion you were shouted at in front of the section and felt acutely embarrassed. You have been given the job of checking all pay PONS in addition to your normal duties including those raised by senior LACs. They resent this and openly comment. You suspect they have been making some deliberate minor errors to add to your difficulties.

The Flight Sergeant has called you to his desk and you are angry and upset.

INTERVIEW ROLE :2: SUPERVISOR

You are a Flight Sergeant supervising an Admin Section. In the section are three ACs and two LACs. You are acutely aware that your once harmonious section has become a rather hostile place with much infighting and bickering. One LAC, Kevin Blake, who joined recently is forever surly, withdrawn, unco-operative and disruptive. You have spoken to the Personnel Officer but find that Blake was highly thought of at his previous section and that there is very little chance of getting him shifted from your section. You have him working in registry but find that he has been incorrectly replacing P/Fs, failing to send on documents of posted airmen and has been very slow in responding to requests for files by Base personnel. He refuses to assist the other airmen unless specifically ordered to do so and then does so with bad grace. Your Corporal has spoken to LAC Blake several times but no obvious improvement has resulted, on the contrary LAC Blake's performance deteriorates after he has been 'sharpened up' by the Corporal. LAC Blake is twenty four and has been in the Service for six years. On speaking to his previous Flight Sergeant you find that while he needed the occasional prod he was an enthusiastic and efficient worker.

You decide to call LAC Blake to your desk to interview him with a view to obtaining better work performance.

INTERVIEW ROLE :2: SUBORDINATE

You are LAC Blake working in Registry. You have been there for five weeks and find that you are working for a Corporal who is younger than you and whom you have known from school days. You are finding his attitude intolerable and he seldom lets you forget that you missed out on the Corporals qualifying course on your first attempt. You feel that you have been placed in a demeaning job and find it difficult to become enthused. You are aware that your attitude is making matters worse but you cannot see any way out of the situation which will allow you to retain face. You have to work hard at written work and are not as verbally fluent as the Corporal who always seems to be able to put you down in front of the other airmen. You are angry and confused and feel everybody is laughing at you.

INTERVIEW ROLE :3: SUPERVISOR

You are the Flight Sergeant supervising an airmovements section. The Officer Commanding Supply Squadron has passed on a number of minor complaints he has received about poor baggage stacking, and generally un-co-operative behaviour in the section. From your own observations you know that LAC LEE is the airman at the centre of these complaints. You originally arranged to have LAC LEE transferred to Airmov because he had been an excellent worker when he worked for you in the Transit section. You have noticed, however, that of late he has been short, although not rude, with passengers, he has been rough with luggage and careless when completing the manifests. Your Corporal has had words with LAC LEE and threatened to charge him on two occasions. LAC LEE offered no explanation but improved briefly in his conduct. The suggestion by the OC that positive action be taken has decided the matter for you and you have called LAC LEE into your office to see if you can get to the bottom of the problem and get him to improve his performance.

INTERVIEW ROLE :3: SUBORDINATE

You are LAC LEE. You are currently working in the AIRMOV Section and are not particularly happy. Up until six months ago you had been in the Transit Section and had enjoyed the work. You knew the job well and dealt with the same group of people most of the time. You got on well with the other airmen and the supervisors left you alone. You are not sure why you were suddenly transferred to the Airmovements Section but find that you are unclear about how to complete a number of the manifest forms and are reluctant to ask the corporal because he always seems so busy. You are naturally shy and do not enjoy dealing with the public. You try not to be rude but are aware that your questions could be taken for rudeness. You are fed up with loading the baggage cart for no matter how you load it someone always finds something wrong. To top matters off you have been taken off the next Corporals Qualifying Course due to the pressure of work in the section. You want to do a good job but are finding that everything is against you. Now the Flight Sergeant has called for you.

INTERVIEW ROLE :4: SUPERVISOR

You are a Flight Sergeant supervising the flight line. Over the past few weeks you have received oblique remarks from some airmen in the section about one of your sergeants, Sgt Blake. The general tenor of the complaints is that Sgt Blake is constantly picking on the airmen for minor dress and discipline matters. You suspect that the comments are well founded as you have overheard the Sergeant berating an LAC about the state of his overalls which were perfectly alright as far as you could tell. The Sgt has been in the Section for two years but has only recently become cantankerous. Other problems have included his picking fault with the work of the airmen, countermanding directions given by the other sergeant in the section and neglecting his own duties. Sgt Blake is a single man and lives in the Mess.

You decide to call Sergeant Blake in to interview him with a view to obtaining a general improvement in his performance.

INTERVIEW ROLE :4: SUBORDINATE

You are Sgt Blake and have been on the Flight line for a couple of years. Just recently there was a reorganisation within the section and a second Sergeant post was established. You cannot fathom the logic behind the move as previously there was enough work to keep a sergeant fully employed but now you are tripping over each other and have insufficient work to keep you busy. You have been unable to talk to the Flight Commander about the change and are pretty annoyed. You have noticed that the airmen seem to prefer the new sergeant and are inclined to listen to him though they should be listening to you. He is more popular both at work and off duty. To make matters worse he seems to be able to handle paperwork faster than you and his airmen appear to be better motivated than yours. You realise that your attitudes are somewhat immature but you don't want to lose face and you resent the upset to what was a smoothly running section. Your Flight Sergeant calls you in to discuss the problem.

INTERVIEW ROLE :5: SUPERVISOR

You are a Flight Sergeant supervising stockholding section. On your staff is AC FRASER who has been with the section for approximately one year. You have recently had to sort out a somewhat complicated confusion concerning an urgent request for an aircraft spare which although still on your sections stockholding inventory could not be located. This incident has brought to light a number of misplaced parts which appear to have been mislocated by AC FRASER. One of the corporals in the section commented that AC FRASER is notorious for mislocating items but the other airmen in the section keep an eye on him and tend to keep him working in areas where he can do the minimum damage. No amount of talking to him or threatening seems to obtain an improvement. AC FRASER is a keen enthusiastic airman who is quite popular and seems to enjoy his work.

INTERVIEW ROLE :5: SUBORDINATE

You are AC FRASER and have worked in the Stockholding Section since finishing your specialist course. You enjoy working in supply because the atmosphere is good and you are given jobs that you can handle. Occasionally however you get involved with stock location but you find this difficult as you never really understood the numercial sequences. You have asked other airmen but still haven't fully grasped the logic and quickly forget the main points. You have stopped asking now because you feel a bit embarrassed by your difficulty in picking up the knowledge. The flight sergeant has called you in for a chat but you don't really know why.

APPENDIX 4

Pre-Post Questionnare (PPQ)

Name: _____

Base: _____ Years as Sergeant (Approx): _____

Years in RNZAF: _____

SECTION A

Place a circle around the number which best indicates the extent to which you agree or disagree with the statement.

1. When a man's work performance is unusually poor, I am confident that in speaking to him, I can remedy the problem

Disagree 1 2 3 4 5 6 7 Agree

2. It is not RNZAF practice to ask a subordinate for solutions to problems about people

Disagree 1 2 3 4 5 6 7 Agree

3. The actions I take in dealing with a problem subordinate are largely determined by:

a. My training Disagree 1 2 3 4 5 6 7 Agree

b. RNZAF practice that I have learned by experience

Disagree 1 2 3 4 5 6 7 Agree

c. My own abilities Disagree 1 2 3 4 5 6 7 Agree

4. I have little choice in the actions I take in dealing with a problem subordinate

Disagree 1 2 3 4 5 6 7 Agree

5. I feel that I really understand my subordinates

Disagree 1 2 3 4 5 6 7 Agree

6. When a man's work is poor, I feel that in speaking to him, I am only going to achieve a temporary improvement

Disagree 1 2 3 4 5 6 7 Agree

7. I believe I show understanding and tolerance of the mistakes my subordinates make

Disagree 1 2 3 4 5 6 7 Agree

8. I feel quite confident in helping subordinates who seek advice on problems about people or themselves

Disagree 1 2 3 4 5 6 7 Agree

9. I think I am a good listener

Disagree 1 2 3 4 5 6 7 Agree

10. I feel confident in my ability to handle a troublesome subordinate

Disagree 1 2 3 4 5 6 7 Agree

11. If one of my subordinates became troublesome at work, I would ask him for a solution

Disagree 1 2 3 4 5 6 7 Agree

12. If a problem arises, the supervisor must take strict measures to solve it

Disagree 1 2 3 4 5 6 7 Agree

13. It is favourable to have a subordinate take part in solving a problem that concerns him

Disagree 1 2 3 4 5 6 7 Agree

14. It is necessary to be severe when making a problem known to the subordinate concerned

Disagree 1 2 3 4 5 6 7 Agree

15. If, in a discussion with a problem subordinate, I am criticised, it is important I make my authority clear

Disagree 1 2 3 4 5 6 7 Agree

16. Accepting a subordinate's idea undermines my authority

Disagree 1 2 3 4 5 6 7 Agree

17. It is preferable for a sergeant to enforce a certain solution to an interpersonal problem than to allow a subordinate to have his own way

Disagree 1 2 3 4 5 6 7 Agree

18. I would like to act correctly in interpersonal situations but find that I don't really have to (Deleted due to mistyping)

Disagree 1 2 3 4 5 6 7 Agree

19. In interpersonal situations which I find difficult to handle, I find myself concerned with upholding my own self esteem as a sergeant

Disagree 1 2 3 4 5 6 7 Agree

20. To be firm with a troublesome subordinate is the best way of presenting a solution to his problem

Disagree 1 2 3 4 5 6 7 Agree

21. A troublesome subordinate is essentially the maker of his own misfortune

Disagree 1 2 3 4 5 6 7 Agree

22. Poor work by a subordinate is usually remedied with discipline

Disagree 1 2 3 4 5 6 7 Agree

23. A man's work performance and his personal problems are separate issues

Disagree 1 2 3 4 5 6 7 Agree

Section B

The previous section was on your attitude to various aspects of your job. This section is on behaviour. You are requested to estimate the degree to which you engage in the behaviours described and circle the number appropriate to that estimate.

Behaviour	Not true of me				True of me
1) I convey an air of confidence in my ability to handle subordinates' problems	1	2	3	4	5
2) Sometimes I refuse to listen to a subordinate's explanation	1	2	3	4	5
3) I find it difficult to assess the capabilities of subordinates and consequently will allocate tasks for which they have not had training or experience	1	2	3	4	5
4) I am consistent in my manner of handling problem subordinates	1	2	3	4	5
5) I am approachable by subordinates	1	2	3	4	5
6) I talk <u>with</u>, not <u>down</u> to subordinates	1	2	3	4	5
7) I find it difficult to communicate with subordinates on a personal level	1	2	3	4	5
8) My personality sometimes affects my decisions	1	2	3	4	5
9) I sometimes pass a troublesome subordinate on to a higher authority when I know the problem could be handled by me	1	2	3	4	5
10) When appropriate, I co-operate with my subordinates rather than rely on a "direct order" relationship	1	2	3	4	5

Behaviour	Not true of me				True of me
11) To avoid unpopularity, I sometimes don't act on a problem until too late	1	2	3	4	5
12) I am concerned about subordinates' work output, deadlines, etc	1	2	3	4	5
13) I know that I sometimes use disciplinary action without first finding reasons for a subordinate's poor behaviour	1	2	3	4	5
14) I ask subordinates if help is required on personal problems	1	2	3	4	5
15) I am able to maintain my composure under pressure	1	2	3	4	5
16) I sometimes discipline a subordinate in front of his peers or subordinates to make an example of him	1	2	3	4	5
17) I am able to ascertain if outside influence (eg marital, financial) is affecting the work performance of a subordinate	1	2	3	4	5
18) I am capable of assisting with subordinates' personal problems	1	2	3	4	5
19) I sometimes talk around a problem, or "ramble on"	1	2	3	4	5
20) I am able to derive positive solutions to problems from private talks	1	2	3	4	5
21) Sometimes my actions over a problem are not clear or concise	1	2	3	4	5
22) I am authoritarian on occasions when it is not always necessary	1	2	3	4	5

Behaviour	Not true of me				True of me
23) After deciding to take an action concerning a subordinate, I find myself repeatedly changing my mind	1	2	3	4	5
24) I praise effort or accomplishment	1	2	3	4	5
25) I possess tact	1	2	3	4	5
26) I sometimes lose my temper and abuse subordinates when things go wrong	1	2	3	4	5
27) I discuss morale, pride in the squadron or flight with my subordinates	1	2	3	4	5
28) I demonstrate my understanding of individuals with my behaviour	1	2	3	4	5
29) I have no wish to become submerged in subordinates' problems	1	2	3	4	5
30) I sometimes become emotional during a confrontation with subordinates	1	2	3	4	5

Thank you for your co-operation

APPENDIX 5

LONG TERM QUESTIONNAIRE (LTQ)

INTRODUCTION

1. During the Flight Sergeant Qualifying Course (formerly NCO Management Course) you recently attended, some training periods were devoted to conducting interviews and dealing with troublesome subordinates.

2. To enable measurement of the effectiveness and validity of the training given, we request that you complete the attached questionnaire. It is emphasised that the information being sought is strictly confined to an evaluation of the interviewing part of the course.

3. If you have not been involved with interviewing subordinates since the end of the course you should only answer the questions specified.

4. Names have been included on the questionnaires for administrative purposes only. They will be removed prior to analysis; we are evaluating the TRAINING and not the TRAINEES.

5. When you have completed the questionnaire use the envelope provided to return it to Senior Field Psychologist, Group Headquarters.

Name: _____

Course No_____

1. Approximately how many times have you interviewed subordinates, either formally or informally, since completing the course. (Please tick).

0*

1 - 3

4 - 6

7 - 10

11+

* If you have not conducted any interviews move directly to questions 11 - 14.

---

2. Approximately, how long were the majority of these interviews?

5 mins

15 mins

30 mins

60 mins

+60 mins

---

3. Approximately, what percentage of the interviews were initiated by you and by the subordinate?

By you %

By subordinate %

---

4. Please give an indication of the types of interviews you have conducted since the course. (Indicate approximate percentage).

Motivating subordinates	%
Disciplining subordinates	%
Performance appraisal	%
Sorting out personal problems	%
Providing instruction or training	%
_____	
Other (specify)	%
_____	
Other (specify)	%

5. During these interviews do you feel that you used:
(circle the letter which best describes your situation)

a. New techniques exclusively
b. Mostly new techniques and some previous techniques
c. An equal mixture of old and new techniques
d. Mostly previous techniques but with some new techniques
e. Only previous techniques

6. How well do you feel the course training equipped you to handle these interviews?

Very well 1 2 3 4 5 6 7 Poorly

Satisfactory

7. a. Have you noticed any changes in the nature of the problem appearing as an interview has progressed? YES/NO

b. If 'YES' please outline the way the problem has usually changed.

---

8. a. Do you think the interviewing skills taught will assist you in finding better solutions to personnel problems? YES/NO

b. If 'YES' please outline the ways in which this will occur.

---

9. a. Were the problems usually solved or dealt with in one session? YES/NO

b. If 'NO' please comment on whether further sessions were arranged and under what circumstances.

---

10. a. Have you noticed any reactions by your subordinates, peers or superiors to your application of interviewing technique or skills learned on the course? YES/NO

b. If 'YES' please outline the nature of the reaction.

11. a. Do you feel your interviewing skills were changed by the course? YES/NO

b. If 'YES' please comment on the nature of the changes.

---

12. In general terms, do you feel the interview skills in training you received is applicable to your SNCO duties? Please comment.

---

13. Have you any recommendations or ideas for change to the interviewing skills segment of the course?

---

14. a. Have you received any interviewing training other than that given on the course? YES/NO

b. If 'YES' please outline the nature of the training and how long ago it was held.

15. Listed below are a number of behaviours or attitudes which could have changed as a consequence of the interviewing skills training. Please rate each on the extent to which you feel it has changed in your case. (Tick appropriate column).

	Worse than before course		Not changed	Better than before course		N/A
	1	2	3	4	5	
a. Co-operation shown by subordinate during interview						
b. Improvement in subordinate's work performance						
c. Your ability to recognise subordinates viewpoint						
d. Consideration you give to subordinates ideas						
e. The morale of your subordinates						
f. The amount of co-operation within the unit						
g. Direction or structure of your interviews						
h. Willingness of subordinates to accept your directions						
i. Your level of confidence when interviewing						
j. Your ability to control the situation						
k. Worthwhileness of the outcome						
l. Your ability to relax during interview						
m. Ability to produce a lasting improvement						
n. Ability of subordinate to relax						
o. Deciding on specific action required of both parties						

		More than before course		No change		Less than before course	N/A
		1	2	3	4	5	
p.	Amount of apprehension you feel in handling emotional problems						
q.	Amount of abrupt behaviour shown by you						
r.	Amount of time you spend listening to the subordinate						
s.	Defensiveness shown by subordinate						
t.	Time taken in finding solutions						
u.	Number of solutions presented						
v.	Discussion of sub-ordinates ideas						
w.	Use of follow up action						

THANK YOU FOR ASSISTING IN THIS STUDY.

APPENDIX 6

INTERVIEW SCRIPT

F/S: Sarge! Have you got a few minutes? I'd like to talk about the section.

SGT: Sure Flight! I'm free at the moment.

F/S: Come into my office. It's a bit warmer in here.

SGT: Thanks! ..... What do you want to talk about?

F/S: Well, as you know I haven't been here long and I have noticed that some things aren't up to the usual standards and need to be improved. Particularly .....

SGT: Hang on there Flight! I've been here for a couple of years and I've never had any complaints from any body, and .....

F/S: Hold it Sarge! I'm not pointing the finger at you or your troops! In fact, this section has a good reputation! I just want to clarify a few things that I have noticed over the past couple of weeks that could be improved. For instance, ... the lads seem to have longer "joe" breaks, sometimes getting on to half an hour or more and there seems to be a general reluctance to get on to the job after roll call. What do you suppose is the problem?

SGT: HMM! Now that you mention it ..... I've had to chase them out of the crewroom quite a few times .....of course! I don't blame them... It's nice and warm in there, compared to the Hangar!

F/S: What do you suppose we could do about this?

SGT: Well!..... The hangar is heated by steam from the boiler room but when the doors are opened, the heat is lost, and it can get pretty cold out in the draught! Whereas the crewroom is much warmer!

F/S: The old pot belly stove eh?

SGT: Yes! Old Ken, the GSH comes in early each morning .....about 7:30 .. to light it and warm the crewroom.

F/S: But surely it isn't necessary to have a warm crewroom at eight o'clock in the morning?

SGT: That's right! But old Ken is pretty keen ... the crewroom is his pride and joy! He gets plenty of compliments about the fire and consequently he gets keener to keep the troops happy!

F/S: AH! I see! (Notes on paper) What about during the day? I've noticed that some of the lads spend a lot of time in there.

SGT: Yes! I've noticed that ..... and told a few off, but they always have a good reason!

F/S: Pretty cold in the Hangar!

SGT: Not only that! The boys are pretty keen and always get stuck into the job when it is first started and then they run into holdups .....

F/S: Yes! There seems to be a lull in the work pattern and we end up rushing to meet the servicing deadlines. What do you know about this?

SGT: That's easy.....We are held up by stores ..... Can't seem to get the rotables on time.

F/S: You mean they haven't got the spares? I thought that problem had been solved when we stopped exchanging them between aircraft!

SGT: Oh! They've got them all right but that new bloke down there won't issue them until he's got one in exchange!

F/S: I see! (Notes on paper) and that takes time to process and causes the troops to run out of work!

SGT: Yes! So into the crewroom to wait for the spares!

F/S: What about pre-ordering the items so that they are here on hand when required?

SGT: We tried that! but they still won't issue until the U/S items go back!

F/S: They are correct of course!

SGT: I suppose so.....but I wish there was a way around it.... without them sticking them on my inventory!

F/S: There may be! (Notes on paper) I'll have a chat to the stores warrant officer and see if he'll allow us to raise return vouchers a couple of days before the servicing is due and, perhaps, we can pre-order against those serial numbers!

SGT: Hey! That's a good idea! That would help a great deal!

F/S: OK! Now here's what we'll do! First you have a chat to the GSH about lighting the fire after eight o'clock, that should encourage the troops to get on with the job. Don't upset him! Just explain the problem. He'll catch on..... in fact, there's no need for him to start early! And I'll get on to stores about the rotables, they might like the idea, and it will stop the flight commander getting on their backs!

SGT: Great!

F/S: Is there anything else you can think of?

SGT: Errm! Yeah! As a matter of fact there is! The lads sometimes moan about not knowing what's going on round the place, and it's difficult to come up with all the answers!

F/S: Well! OK! Maybe we can introduce a weekly briefing!

SGT: Yeah! that'd be good!

F/S: Right! (Notes on paper) I'll organise a brief early next week. We'll have it in the crewroom after morning "joe". Can you come to see me before hand, say, ten o'clock. That'll be the .....17th?

SGT: OK! I'll have a word to old Ken right now!

F/S: Good! Till next Tuesday then! Thanks for your help Sarge!

APPENDIX 7

RATING SCALES USED IN ROLE PLAY EVALUATION

1. Describes Problem in easy manner

   1. Confronts in a manner likely to antagonise; dominatory.

   2. States trouble; states interviewee to be main cause.

   3. States trouble; clarifies interviewee's involvement; asks for explanation.

   4. Addresses without actually saying he is at fault, but interviewee's fault is inferred.

   5. States trouble; clarified interviewee's involvement; asks for clarification of problem; tone suggests impartial consideration, not condemnation.

   6. Relates problem as a "we have this problem" basis; and "can you shed any light on it".

   7. As for "6"; deliberately steers away from any inference taken by interviewee that he's at fault; interviewee's esteem maximally maintained; assistance likely forthcoming.

2. Listens/Empathises with Explanations

   1. Allows no explanation; if explanation given, turns it against interviewee.

   2. Explanation offered; no comments made to show its been heard or understood; interviewee fighting to maintain "face"; repeatedly explaining himself.

   3. Explanation offered; comments by interviewer (eg, "Ah ha" "I see" etc); context of his speech shows he has taken explanation into account; little credence given them however.

   4. Explanation called for; explanation offered by interviewee and responded to; little enthusiasm shown for explanations.

   5. Explanation asked for; explanation offered and discussed; priority of talks given to interviewer's concerns; no indication of empathy.

   6. Explanation heard; discussed on equal basis; interviewer appears on same mood wavelength as interviewee.

   7. Asks for explanation; allows it; responds encouragingly to it; comments made that indicate being "tuned in" to how interviewee feeling; generally responds in a way that should relax interviewee and encourage more explanation.

3. Asks for or allows Subordinate's help (in solving problem)

1. Dictates solution to interviewee.

2. Dictates solution; consideration given to interviewee's solutions but quickly buried or negated.

3. Allows solutions to appear but no recognition given of them; No solutions invited.

4. Allows solutions to appear; his speech indicates he's receptive to solutions forthcoming; Solutions generally are considered but not implemented.

5. Asks for help -- immediately talks on thus over-running any immediate opportunity for help to be forthcoming; later considers offered solutions.

6. Asks for help; as solutions appear discusses them with interviewee; objective consideration given; interviewee allowed to discuss on his solutions, not superior's; Solutions not presented but interviewer gives impression that he would listen/be receptive.

7. Asks for help; maintains authority in doing so; gets subordinate to "side" with him objectively on problem; lists solutions and discusses them in a block later; both discuss both peoples' ideas.

4. Discusses/notes each idea

1. Any suggestions forthcoming rejected; no invitation for ideas or welcome of them.

2. Solutions as suggested repudiated; inference being they're stupid or not welcome; No solutions invited.

3. Ideas as suggested repudiated after fair discussion.

4. Discusses ideas as forthcoming from interviewee; but none taken up and acted on.

5. Discusses ideas as forthcoming from interviewee; some taken up and acted.

6. Discusses ideas as forthcoming from interviewee; fruitful discussion/results.

7. Discusses ideas as forthcoming from interviewee; both discuss his suggestions also.

5. Decides on Action for Each

1. Tells "pull socks up" basis; interviewee sent off.

2. Tells interviewee what he should do; no consideration of interviewee's ideas; token gesture to interviewee's agreement with him.

3. Tells him what both going to do; little consideration of interviewee's input but does listen/react minimally to what interviewee says.

4. Listens fairly/understandingly to what interviewee says then says what he/both will do.

5. Listens fairly/understandingly to interviewee; suggests/discuss what he/both will do.

6. Appears to have interviewee working on his side of problem; both suggest actions; both go away with solution in mind.

7. As for 6 but interviewer lists actions each will take at end of interview to summarise.

6. Sets specific follow-up date

1. No date set. Booted out.

2. Date suggested vaguely as parting comment.

3. Date suggested vaguely in context of action to be taken. Events clear but no date set/discussed.

4. Date for recheck discussed; No firm time set (eg, "soon" or "tomorrow sometime").

5. Date for re-check discussed.

6. Definite date/time set; Future course of events clear to both.

7. Definite date, time/place set; agreed to by interviewee.

7. Degree of Analysis for Real Problem

1. None, interviewer believes he has problem solved.

2. Demands reasons for problems; considers them negatively.

3. Asks for reasons; considers them briefly with interviewee.

4. Interchanges a few times with interviewee; gives own solution; seeks token agreement; makes own summary.

5. Discusses objectively; considers interviewee's points; as for 4 but obtains complete agreement.

6. Interviews; gains more information after initial interchange.

7. Allows interviewee to talk; interviews him; attains new information so that nature of problem changes.

8. Extent Subordinate's Self Esteem Upheld

   1. Interviewee squashed; reprimand only; reprimand inappropriate to trouble.

   2. Interviewee little considered; feels that application of stern measures paramount in interviewer's mind.

   3. Interviewee pulled up in mood somewhat; sounds moderately satisfied with solution.

   4. Interviewee asked how he feels about problem/solutions; Interviewer dominating.

   5. As for 4; his feelings considered and discussed.

   6. As for 5; feelings elaborated on and solutions arrived at with these in mind.

   7. As for 6 but interviewee sounds very content/happy with outcome.

9. Interviewer's Competence/Ease of Relating

   1. One sided; interviewer sure, but condemnatory; very awkward; could invite challenge to his authority.

   2. Talks briefly; conversation not on same wavelength to interviewee's.

   3. Attempts to get on same wavelength; speech tense.

   4. Conversation free-flowing but uninspiring.

   5. Free flowing; interviewer capable of reprimand and/or empathy.

   6. A listener; reflects what interviewee saying; own speech is relaxed; authority assured.

   7. As for "6"; able to interrogate pleasantly.

10. Mutuality of Agreement to Solutions

   1. Instruction given; no consideration of agreement.

   2. Token consideration of agreement; interviewee still very dissatisfied.

   3. His satisfaction discussed; he assured solutions will change situation; still very dissatisfied.

   4. As for "3" only interviewee sounds hopeful/trusting that solutions will work.

   5. Solutions from interviewee considered and utilised.

   6. Solutions mutually decided; enthusiasm not noted.

   7. Both on same side of problem -- both enthusiastic to carry out solutions.

APPENDIX 8

DEFINITIONS

Several terms are used which have application to this thesis.

Programme:

The term given to the instructional package and instructional contents (or Six Steps) combined.

Instructional package:

The educational technique developed by Goldstein and Sorcher ('72). It consists of four major learning activities -- modelling, role-playing, reinforcement and transfer of learning.

Instructional contents or Six Steps:

A set of statements which concisely describes a sequence of behaviours to be followed by an interviewer that can achieve the objectives of a particular module.

Module:

A module consists of all four learning activities plus the six steps used, designed to teach a single interaction skill or objective (eg, Interviewing a new employee).

Behaviour:

The manner of trainees performing that is discernable by others by observation or hearing, prompting them to make an assessment, no matter how subtle, about the trainees' interpersonal relating ability.

CTS: Command Training School, Wigram.

GSK: General Service Knowledge instructor.

LAC: Leading Aircraftsman.

AC: Aircraftsman.